

extra

WA 6819

5/2/00

10a

SWMU 2-87.65 Machine Pit,
SWMU 77 PCB Retention Tank,
SWMU 78.B Oil/Water Separator, and
OA 16 Former Hazardous Waste Storage
Facility

Interim Measures Completion Report

Boeing Plant 2
Seattle/Tukwila, Washington

Submitted To:
The Boeing Company

May 2000

FILE COPY

USEPA RCRA



3013435

WESTON
MANAGERS DESIGNERS/CONSULTANTS

SWMU 2-87.65 Machine Pit,
SWMU 77 PCB Retention Tank,
SWMU 78.B Oil/Water Separator,
and OA 16 Former Hazardous
Waste Storage Facility
Interim Measures Completion Report

Boeing Plant 2
Seattle/Tukwila, Washington

Prepared for

The Boeing Company
Seattle, Washington

May 2000

Prepared by

Roy F. Weston, Inc.
700 Fifth Avenue
Suite 5700
Seattle, WA 98104-5057

WO 3709-034-413-0010

TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
1. INTRODUCTION.....	1
2. BACKGROUND.....	1
2.1 SWMU/OA DESCRIPTION.....	1
2.1.1 SWMU 2-87.65 Machine Pit.....	1
2.1.2 SWMU 78.B Oil/Water Separator.....	2
2.1.3 SWMU 77 Building 2-110 PCB Retention Tank (Vault 19).....	2
2.1.4 OA 16 Former Hazardous Waste Storage Facility.....	3
2.2 DELINEATION OF EXCAVATION BOUNDARIES	3
3. INTERIM MEASURES OBJECTIVES	4
4. DESCRIPTION OF WORK COMPLETED.....	5
4.1 SWMU 2-87.65 MACHINE PIT.....	5
4.2 SWMU 78.B OIL/WATER SEPARATOR.....	7
4.3 SWMU 77 BUILDING 2-110 PCB RETENTION TANK (VAULT 19).....	8
4.4 OA 16 FORMER HAZARDOUS WASTE STORAGE FACILITY.....	9
5. DISPOSAL.....	10
6. QUALITY CONTROL.....	11
7. SUMMARY.....	11
8. REFERENCES.....	12
APPENDIX A—EPA APPROVAL LETTER	
APPENDIX B—RFI SOIL ANALYTICAL DATA	
APPENDIX C—CONFIRMATORY SAMPLE RESULTS	
APPENDIX D—QA CHECKLIST	
APPENDIX E—COMPARISON OF REMAINING SOIL TO MTCA C	

LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	Constituents Exceeding Cleanup Goals	3
2	Confirmatory Analyses	4
3	SWMU 2-87.65 Confirmatory Sample Data.....	6
4	SWMU 78.B Confirmatory Sample Data	7
5	SWMU 77 Confirmatory Sample Data.....	9
6	OA 16 Confirmatory Sample Data.....	10
7	Disposal Volumes	11

LIST OF FIGURES

<u>Figure</u>	<u>Title</u>
1	Facility Map
2	SWMU/OA Locations
3	SWMU 2-87.65 and 78.B Sample Locations
4	SWMU 77 Sample Locations
5	OA 16 Sample Locations
6	Proposed Excavation Boundaries
7	SWMU 2-87.65 Confirmatory Sample Locations
8	Proposed and Final Excavation Boundaries
9	SWMU 78.B Confirmatory Sample Locations
10	SWMU 77 Confirmatory Sample Locations
11	OA 16 Confirmatory Sample Locations

LIST OF ACRONYMS

<u>Acronym</u>	<u>Definition</u>
BEP	bis(2-ethylhexyl)phthalate
BNA	Base/Neutral Acid
CMS	Corrective Measures Study
EPA	U.S. Environmental Protection Agency
MCL	Media Cleanup Level
MTCA	Model Toxics Control Act
OA	Other Area
PCB	Polychlorinated Biphenyl
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
SWMU	Solid Waste Management Unit
TPH	Total Petroleum Hydrocarbon
TSD	Treatment, Storage, and Disposal
VOC	Volatile Organic Compound

**SWMU 2-87.65 MACHINE PIT,
SWMU 77 PCB RETENTION TANK,
SWMU 78.B OIL/WATER SEPARATOR, AND
OA 16 FORMER HAZARDOUS WASTE STORAGE FACILITY
INTERIM MEASURES COMPLETION REPORT**

**BOEING PLANT 2
SEATTLE/TUKWILA, WASHINGTON**

1. INTRODUCTION

This completion report describes Interim Measures performed at the following Solid Waste Management Units (SWMU) and Other Areas (OA) at Boeing Plant 2: SWMU 2-87.65 (Machine Pit), SWMU 77 (PCB Retention Tank), SWMU 78.B (Oil/Water Separator), and OA 16 (Former Hazardous Waste Storage Facility). These Interim Measures were conducted pursuant to an U.S. Environmental Protection Agency (EPA) Resource Conservation and Recovery Act (RCRA) Administrative Order on Consent (Order) for The Boeing Company's (Boeing) Plant 2 Facility in Seattle/Tukwila, Washington.

The units were located in the southern portion of Boeing Plant 2 near the southeast corner of Building 2-87 (Figure 1). This area of Plant 2 is being redeveloped. Interim Measures were completed for the units listed above prior to the Corrective Measures Study (CMS) in order to allow construction of the new buildings to proceed. The Interim Measures work focused only on soil cleanup. Groundwater remediation was not addressed in these Interim Measures. Groundwater remediation, if required, will be addressed during completion of the CMS.

The scope of work for these Interim Measures is described in the Interim Measures Work Plan (WESTON 1998). The Interim Measures Work Plan was approved by EPA on February 8, 1999. The EPA approval letter (EPA 1999) is provided in Appendix A.

The scope of work consisted of excavating soil at these units and collecting confirmatory soil samples. As indicated in the Interim Measures Work Plan, the cleanup goals for this work were 100 times Model Toxics Control Act (MTCA) Method B surface water concentrations. Additional excavation was performed, as practical, when the confirmatory samples exceeded the cleanup goals.

2. BACKGROUND

2.1 SWMU/OA Description

2.1.1 SWMU 2-87.65 Machine Pit

SWMU 2-87.65 Machine Pit was a reinforced concrete trench approximately 3 feet wide by 26 long by 2.5 feet deep and was used to collect oil that dripped from machinery. Its location is shown in Figure 2. Constituents that may have been released from the unit included volatile

organic compounds (VOCs), base-neutral acid extractables (BNAs), polychlorinated biphenyls (PCBs), metals, and total petroleum hydrocarbons (TPH).

Soil was sampled near the unit during the RCRA Facility Investigation (RFI) (WESTON 1997) to determine if a release had occurred and to characterize the nature and extent of the release. RFI sample locations are shown in Figure 3. Concentrations of TPH and PCBs in soil exceeded RFI reference concentrations.

Analytical laboratory results from RFI soil samples collected around this unit are provided in Appendix B.

2.1.2 SWMU 78.B Oil/Water Separator

SWMU 78.B is located on the south side of Building 2-87 as shown in Figure 2. SWMU 78.B was an oil/water separator that was used to remove oil from stormwater runoff. Oil from the separator was regularly pumped out and shipped off-site for disposal.

SWMU 78.B was approved for No Further Action in the RFI Work Plan (WESTON 1994b). However, during the RFI, low levels of PCBs were detected near the unit at 10 feet below ground surface. The PCBs are believed to be from SWMU 2-87.65 located immediately east. Soil removal was planned to remediate other units in this immediate area (including SWMU 2-87.65) prior to construction of the new building. Therefore, Boeing decided to remove SWMU 78.B and excavate the underlying soil as well.

Analytical laboratory results from RFI soil samples collected near this unit are provided in Appendix B.

2.1.3 SWMU 77 Building 2-110 PCB Retention Tank (Vault 19)

SWMU 77 consisted of three areas that provided secondary containment for PCB electrical transformers. Reference to SWMU 77 within this document refers to the area located north of Building 2-110 (Vault 19) as shown in Figure 2. The secondary containment consisted of a bermed concrete area that was connected to an underground storage tank (UST) via piping. The tank and piping had been removed. Constituents potentially released from SWMU 77 consisted of PCBs and TPH.

Soil samples were collected from several locations around SWMU 77 during the RFI and analyzed for metals, PCBs and TPH. Sample locations are shown in Figure 4. No PCBs or TPH were detected. However, metals including chromium were detected in the soil samples. Since metals were not handled at SWMU 77, the presence of metals is believed to be from Cistern 4, located approximately 40 feet northeast. Metals near SWMU 77 were addressed by the Interim Measure completed at Cistern 4. This work is documented in the SWMU 79 Cisterns Interim Measures Completion Report (WESTON 1999).

Data collected during the RFI did not indicate the presence of TPH or PCBs in the soil near SWMU 77. However, Boeing decided to remove SWMU 77 and excavate the underlying soil

since soil removal was going to occur to remediate other units in the immediate vicinity (i.e., SWMU 2-87.65 and OA 16).

Analytical laboratory results from RFI soil samples collected around this unit are provided in Appendix B.

2.1.4 OA 16 Former Hazardous Waste Storage Facility

OA 16 is a former RCRA container storage area (Building 2-104 TSD) that has gone through aboveground RCRA closure in accordance with the approved RCRA closure plan and as certified by a professional engineer (WESTON 1994a). The former container storage area has since been used for covered parking. Figure 2 shows the location of OA 16.

Constituents potentially released from OA 16 consisted of VOCs, BNAs, PCBs, and metals. Boeing conducted near-surface and subsurface soil sampling in 1994 during closure of the aboveground portion of OA 16. Additional sampling was conducted during the RFI. Sample locations are shown in Figure 5. VOCs, BNAs, and metals were detected in soil samples exceeding RFI reference concentrations.

Analytical laboratory results from soil samples collected around this unit are provided in Appendix B.

2.2 Delineation of Excavation Boundaries

Soil cleanup goals were developed to determine the initial excavation boundaries for these Interim Measures because final media cleanup levels (MCLs) have not been established by EPA. One hundred times the Model Toxics Control Act (MTCA) Method B surface water criteria were used as the cleanup goals as specified in the approved Interim Measures Work Plan (WESTON 1998). Final MCLs will be developed as part of the CMS, which is currently in process.

Soil data were screened against the cleanup goals. Constituents that exceeded the cleanup goals (see Table 1) were used to delineate the excavation boundaries.

Table 1—Constituents Exceeding Cleanup Goals

Constituent	SWMU 2-87.65	OA 16
	Exceeded Cleanup Goals	
Cadmium		√
Chromium		√
Copper		√
Mercury		√
PCBs	√	
Bis(2-ethylhexyl)phthalate		√

In the case of SWMUs 77 and 78.B, no constituents exceeded the cleanup goals. The excavation boundary for SWMU 78.B was established at 3 feet beyond the oil/water separator structure. The excavation boundary for SWMU 77 was established 3 feet beyond the edges of the transformer containment pad.

The excavation boundaries for SWMU 2-87.65, SWMU 77, SWMU 78.B and OA 16 were specified in the Interim Measures Work Plan (WESTON 1998) and are shown in Figure 6.

Table 2 provides a list of the constituents (and cleanup goals) that were analyzed in the confirmatory soil samples collected after the units had been removed. This list of confirmatory analytes was obtained from the Interim Measures Work Plan (WESTON 1998).

Table 2—Confirmatory Analyses

Constituent	Cleanup Goals By Unit (mg/kg)			
	SWMU 2-87.65	SWMU 78.B	SWMU 77	OA 16
Cadmium	--	--	--	2.0
Chromium	--	--	--	48.2
Copper	--	--	--	266
Mercury	--	--	--	0.07
PCBs	0.033 ^a	0.033 ^a	0.033 ^a	--
TPH	200	200	--	--
Bis(2-ethylhexyl)phthalate	--	--	--	0.35

Notes:

^a The cleanup goal of 0.033 mg/kg is the laboratory practical quantitation limit.

-- Indicates this constituent was not a confirmatory analyte.

3. INTERIM MEASURES OBJECTIVES

The objectives of the Interim Measures at the four units were the following:

- Objective #1 - Remove soil to the extent that no potential future risks to human health or the environment above accepted guidelines are likely given the proposed use of the area.
- Objective #2 - Complete the Interim Measures in a manner that will not conflict with implementation of a final remedy based on the outcome of a CMS evaluation of constituents present.
- Objective #3 - Remove impacted soil such that no short-term risks occur to workers during construction of the new facility.

4. DESCRIPTION OF WORK COMPLETED

FOSS Environmental Services Inc. (FOSS) was subcontracted by WESTON to perform the construction work. WESTON provided oversight of the construction activities and reported directly to the Boeing on-site field engineer.

Based on soil data for these units, excavation boundaries were marked on the existing pavement, which was then cut by a concrete cutting service. A utility survey of both locations was completed, and existing utilities were marked.

FOSS prepared a health and safety plan for the construction work. Exclusion zones were setup around the areas to be excavated. All work was performed using Level D personal protection equipment.

Throughout construction, the WESTON site engineer prepared daily reports documenting the items discussed in the Interim Measures Work Plan. The daily reports were being kept with the project files, and documentation of the work was provided to EPA in Boeing's monthly status reports.

The Interim Measure activities consisted of soil removal, confirmatory sampling, and off-site disposal. Impacted soil was excavated using a trackhoe and loaded into either roll-off containers or directly into trucks for off-site disposal.

The excavation approach consisted of removing soil within the excavation boundaries identified in the Interim Measures Work Plan then sampling the sidewalls and bottom. If the confirmatory samples exceeded 10 times the Table 2 cleanup goals, additional excavation was performed as practical (WESTON 1998). If the confirmatory sample results were lower than 10 times the Table 2 cleanup goals, additional excavation was not required in that area. The samples were sent to Analytical Resources Inc. for a rapid turnaround analysis for specific constituents for each unit.

The specific Interim Measure activities for each unit are described below.

4.1 SWMU 2-87.65 Machine Pit

Initial excavation began on May 18, 1999. Soil in an area 5 foot wide by 5 foot deep was removed along the unit's north boundary. The soil was placed into dump trucks for disposal. The majority of remaining soil within the excavation boundary was removed on May 26 and 27. Excavation work was completed on May 28.

The machine pit excavation was roughly triangular in shape, measuring 33 feet along the north-south axis and 26 feet in the east-west direction. The depth of the excavation was approximately 5 feet. A 10-foot-deep area was excavated in the southwest corner. The 10-foot-deep excavation measured 8 feet long by 6 feet wide. This area was excavated to a depth of 10 feet to remove PCBs which exceeded cleanup goals.

During soil removal, a concrete vault measuring 10-feet wide by 12-feet long by 12-feet deep was encountered approximately 1 foot below ground surface in the center of the excavation. The vault had been backfilled with pea gravel and covered with a concrete slab at some point in the past. The vault was left in place during excavation; however, the material inside the vault was removed. The vault was later removed (on July 13) as part of site preparation for new construction.

At this point, three confirmatory sidewall samples (SB-08739, SB-08740, SB-08741) and two bottom samples (SB-08738, SB-08742) were collected and analyzed for TPH and PCBs after the initial excavation limits were reached. The sidewall samples were taken approximately 3 feet below ground surface. The sidewall and north bottom samples were collected using a hand shovel. The shovel was decontaminated after each use. The south bottom sample was collected using the bucket of the backhoe because of the depth of the excavation.

Sample analyses indicated that TPH did not exceed the cleanup goals. PCBs exceeded 10 times the cleanup goals in samples from the north and west sidewalls. PCBs in the two bottom samples were within 10 times the cleanup goal.

Due to concentrations of PCBs exceeding cleanup goals, approximately 10 feet of additional soil was excavated to a depth of 5 feet from both the north and west sidewalls on June 21. Two additional confirmatory samples (SB-08752, SB-08753) were then collected from these walls. The location of all confirmatory samples is shown in Figure 7.

PCBs were not detected in the second confirmatory sample from the west wall. PCBs were detected in the second confirmatory sample from the north wall at a concentration of 0.016 mg/kg. Since PCB concentrations did not exceed the cleanup goals, no further excavation was performed at SWMU 2-87.65.

Table 3 provides a summary of the confirmatory sample data. Laboratory data are provided in Appendix C.

Table 3—SWMU 2-87.65 Confirmatory Sample Data^a

Constituent	Cleanup Goal	North Wall	Southeast Wall	West Wall	North Bottom	South Bottom
		SB 08752	SB 08741	SB 08753	SB 08742	SB 08738
PCBs	0.033	0.016	0.035 U	0.035 U	0.17	0.335
TPH	200	NA	11 U	NA	13	14

Notes:

^a Concentration in mg/kg.

SB-xxxxx - Soil sample number.

U - Undetected.

NA - Not Analyzed.

The excavation was backfilled and compacted on June 28-29.

Figure 8 shows the excavation limits proposed in the Interim Measures Work Plan and the final excavation limits. A total of 220 cubic yards of soil was removed from this area.

4.2 SWMU 78.B Oil/Water Separator

The concrete pavement at this unit was removed on May 17, 1999. An 11 foot long by 8 foot wide by 5 foot deep area was excavated, and the soil was placed in a 20 cubic yard roll-off container.

Five confirmatory soil samples were collected from the excavation. One bottom (SB-08732) and four sidewall (SB-08728, SB-08729, SB-08730, SB-08731) samples were collected and analyzed for TPH and PCBs. The sidewall samples were taken at approximately 3 feet below ground surface. The location of the confirmatory samples is shown in Figure 9. The sidewall and bottom samples were collected using a shovel. The shovel was decontaminated after each use.

No TPH was detected, however, the samples contained PCBs ranging from 0.25 to 0.84 mg/kg. The east sidewall, west sidewall and bottom samples exceeded the PCB cleanup goal (including the factor of 10 allowance).

Table 4 provides a summary of the confirmatory sample data. Laboratory data are provided in Appendix C.

Table 4—SWMU 78.B Confirmatory Sample Data^a

Constituent	Cleanup Goal	North Wall	South Wall	East Wall	West Wall	Bottom
		SB 08729	SB 08731	SB 08730	SB 08728	SB 08732
PCBs	0.033	0.27	0.25	0.84	0.69	0.69
TPH	200	11 U	100	44	11 U	83

Notes:

^a Concentrations in mg/kg.

SB-xxxxx - Soil sample number.

U - Undetected.

On June 14, a meeting was held with EPA to discuss the results of the ongoing Interim Measure work and to obtain concurrence on further planned excavation. EPA was informed that the PCBs at SWMU 78.B exceeded 10 times the cleanup goals but were within MTCA Method A cleanup levels. Boeing also explained that modeling was likely to show that PCBs were tightly bound to soil and due to their high partitioning coefficients it was unlikely that PCBs would have an impact on surface water. Permission to terminate excavation was requested. EPA concurred with Boeing's proposed plan for no further excavation at this unit.

The excavation was backfilled and compacted on June 28-29. A total of 15 cubic yards of soil was removed from this unit. Figure 8 shows the initial and final excavation limits.

4.3 SWMU 77 Building 2-110 PCB Retention Tank (Vault 19)

The bermed concrete transformer pad and pavement were removed at this unit on May 17, 1999. Excavation began on May 20 and was completed on May 25. The area of soil excavated measured 14 feet wide by 18 feet long by 5 feet deep. Soil removed from the excavation was placed into 20 cubic yard roll-off containers.

Five confirmatory samples were collected. Two bottom (SB-08734, SB-08737) and three sidewall samples (SB-08733, SB-08735, SB-08736) were collected and analyzed for PCBs. The sidewall samples were collected at approximately 2.5 feet below ground surface. The location of the confirmatory samples is shown in Figure 10. No sample was collected from the west sidewall because the western wall extended into an area that had been previously excavated as part of site redevelopment.

Three hand auger samples were also collected from the area associated with the former retention tank and pipe run (which connected the tank to the transformer pad). The purpose of this sampling was to characterize the soil near the former tank and piping to determine if PCBs were present. Sample SB-08750 was collected from the pipe run, and SB-08749 and SB-08751 were collected from the east and south walls of the former tank excavation. During sampling, pea gravel (which was used to backfill the hole where the former tank was located) was encountered. Care was taken to ensure the sidewall and piperun samples were native material and not backfill. Attempts to sample the bottom of the former tank excavation were unsuccessful due to the presence of the pea gravel.

Samples taken from the SWMU 77 excavation were collected using a shovel. Samples from the former tank and piping areas were taken using a hand auger. Sampling equipment was decontaminated between sampling events.

All samples were analyzed for PCBs. PCBs were not present in any samples above the detection limits, either in the SWMU 77 excavation or in the former tank and piping location. Therefore, no further excavation was performed.

Table 5 provides a summary of the results of confirmatory sampling. Laboratory data are provided in Appendix C.

Table 5—SWMU 77 Confirmatory Sample Data^a

Bermed Transformer Pad							
Constituent	Cleanup Goal	North Wall	South Wall	East Wall	West Wall	West Bottom	East Bottom
		SB 08735	SB 08733	SB 08736	NA ^b	SB 08737	SB 08734
PCBs	0.033	0.036 U	0.036 U	0.036 U	NA ^b	0.045 U	0.045 U

Former Tank and Pipe						
Constituent	Cleanup Goal	Pipe Run	Pipe Run	East Wall	South Wall	Bottom
		SB 08721 ^c	SB 08750	SB 08749	SB 08751	
PCBs	0.033	0.042 U	0.036 U	0.017 J	0.037 U	Not collected ^d

Notes:

^a Concentration in mg/kg.

^b The west wall of the SWMU 77 excavation extended into an area that had been previously excavated as part of building construction. No sidewall sample could be collected.

^c Sample collected to delineate Cistern 4 extent also served as pipe run sample.

^d Bottom sample could not be collected due to caving backfill.

SB-xxxxx - Soil sample number.

U - Undetected.

J - Estimated value when result is less than calculated reporting limit.

NA - Not Applicable

The SWMU 77 excavation was backfilled and compacted on June 28-29.

Figure 8 shows the initial and final excavation limits for SWMU 77. A total of 72 cubic yards of soil was removed.

4.4 OA 16 Former Hazardous Waste Storage Facility

Soil excavation at OA 16 began and was completed on May 25, 1999. The excavation was roughly 15 feet wide by 15 feet long by 10 feet deep. Excavated soil was placed into dump trucks. Groundwater was encountered at the bottom of the excavation.

Confirmatory soil samples were collected using the bucket of the backhoe due to the excavation depth. The location of the confirmatory samples is shown in Figure 11. Because of the large size of the backhoe bucket, bucket decontamination between sampling events was not necessary. To ensure there was no cross contamination in soil samples taken from different locations, the bucket was emptied of all soil between sampling events and the soil sample was collected from the center of the bucket.

A bottom sample (SB-10406) and four sidewall samples (SB-10407, SB-10408, SB-10409, SB-10410) were collected and analyzed for bis(2-ethylhexyl)phthalate (BEP) and metals. The sidewall samples were collected approximately 5 feet below ground surface. Constituent

concentrations did not exceed cleanup goals, with the exception of bis(2-ethylhexyl)phthalate, which was 1.4 times the cleanup goal in the east and west wall samples. Since metals did not exceed the cleanup goals and BEP was less than 10 times the cleanup goal, no additional excavation was performed at OA 16.

Table 6 provides a summary of the confirmation sample results. Laboratory data are provided in Appendix C.

Table 6—OA 16 Confirmatory Sample Data^a

Constituent	Cleanup Goal	North Wall	South Wall	East Wall	West Wall	Bottom
		SB 10407	SB 10409	SB 10408	SB 10410	SB 10406
Cd	2.0	0.2 U	0.2	0.4	0.2 U	0.3 U
Cr	48.2	9.6	10.1	14.5	10.5	9.8
Cu	266	8.7	11.1	16.8	9.1	9.2
Hg	0.07	0.05 U	0.04 U	0.07 U	0.05 U	0.06 U
B.E.P.	0.35	0.07 U	0.18	0.47	0.5	0.09

Notes

^a Concentrations in mg/kg.

SB-xxxxx - Soil sample number.

U - Undetected

Backfill of this unit was completed on June 28-29.

Figure 8 shows the initial and final excavation boundaries. A total of 42 cubic yards of soil was removed from this unit.

5. DISPOSAL

Excavated soil was placed directly into dump trucks or roll-offs (not stockpiled). The soil from SWMU 2-87.65 and OA 16 was disposed of at the Waste Management, Inc. hazardous waste landfill in Arlington, Oregon. Soil from SWMU 77 and 78.B was disposed of at the Columbia Ridge landfill in Roosevelt, Washington.

A summary of the disposal volumes is provided in Table 7.

Table 7—Disposal Volumes

Unit	Soil Disposal Volumes (cubic yards)
SWMU 2-87.65	220
SWMU 78.B	15
SWMU 77	72
OA 16	42
Total Volume	349

Personnel protective equipment was placed in separate containers and disposed of by Boeing.

6. QUALITY CONTROL

Sampling methods were performed in accordance with the RFI Sampling and Analysis Plan (WESTON 1994b), as required by the Interim Measures Work Plan (WESTON 1998). Sampling equipment was decontaminated after each sampling event using an initial dry brushing to remove gross contamination, followed by Alconox™ and deionized water rinse.

A completed construction quality control checklist is provided in Appendix D.

7. SUMMARY

Work was performed according to the scope in the Interim Measures Work Plan (WESTON 1998). The final size of the excavations were very close to those proposed in the Interim Measures Work Plan, except the west and north walls of SWMU 2-87.65 were extended to remove additional soil containing PCBs.

With few considerations, the objectives of the Interim Measures at the four units were achieved:

- Objective #1 was met by removing the majority of the soil with constituents exceeding cleanup goals. Removing soil that exceeded cleanup goals protects human health and the environment by preventing constituents from leaching into groundwater and subsequently discharging to surface water in excess of water quality criteria.
- Objective #2 was met. It is anticipated that modeling performed during the CMS will show that soil surrounding the units has no adverse effects on the environment.

Concentrations of PCBs at SWMU 78.B exceeded an order of magnitude of the cleanup goal in samples from the east sidewall, west sidewall and bottom. PCB concentrations at these locations were less than 1 mg/kg (MTCA Method A). Concentrations of BEP at OA 16 were 40% greater than the cleanup goal at 2 locations (east and west sidewalls).

Preliminary modeling indicates that PCBs and BEP will not reach the waterway due to their high partition coefficients and affinity for organic carbon. Final modeling of these constituents (to be performed during Fate and Transport Modeling in the Corrective Measures Study) and their potential effect on the waterway has yet to be submitted and reviewed by EPA.

- Objective #3 was met by removing soil exceeding MTCA Method C Industrial criteria. MTCA Method C criteria are concentrations that are protective of human health for workers at industrial facilities. The constituents in soil surrounding these units are below MTCA Method C concentrations indicating there is no significant risk to human health. A comparison of the remaining constituent concentrations (in confirmatory soil samples and soil samples surrounding these units) to MTCA Method C is provided in Appendix E.

8. REFERENCES

EPA (Environmental Protection Agency). 1999. Letter from EPA to The Boeing Company. Subject: Interim Measures Work Plan- SWMU 2-87.65 Machine Pit, SWMU 77 PCB Retention Tank, SWMU 78.B Oil/Water Separator, and OA 16 Former Hazardous Waste Storage Facility. February.

WESTON. 1999. SWMU 79 Cistern Interim Measures Completion Report Boeing—Plant 2, Seattle/Tukwila, Washington. Prepared for The Boeing Company. Roy F. Weston, Inc., Seattle, WA. August.

WESTON. 1998. SWMU 2-87.65 Machine Pit, SWMU 77 PCB Retention Tank, SWMU 78.B Oil/Water Separator, and OA 16 Former Hazardous Waste Storage Facility Interim Measures Work Plan. Prepared for The Boeing Company, Seattle WA. December.

WESTON. 1997. RFI Soil Investigation Interim Report. Prepared for The Boeing Company, Seattle, WA. August.

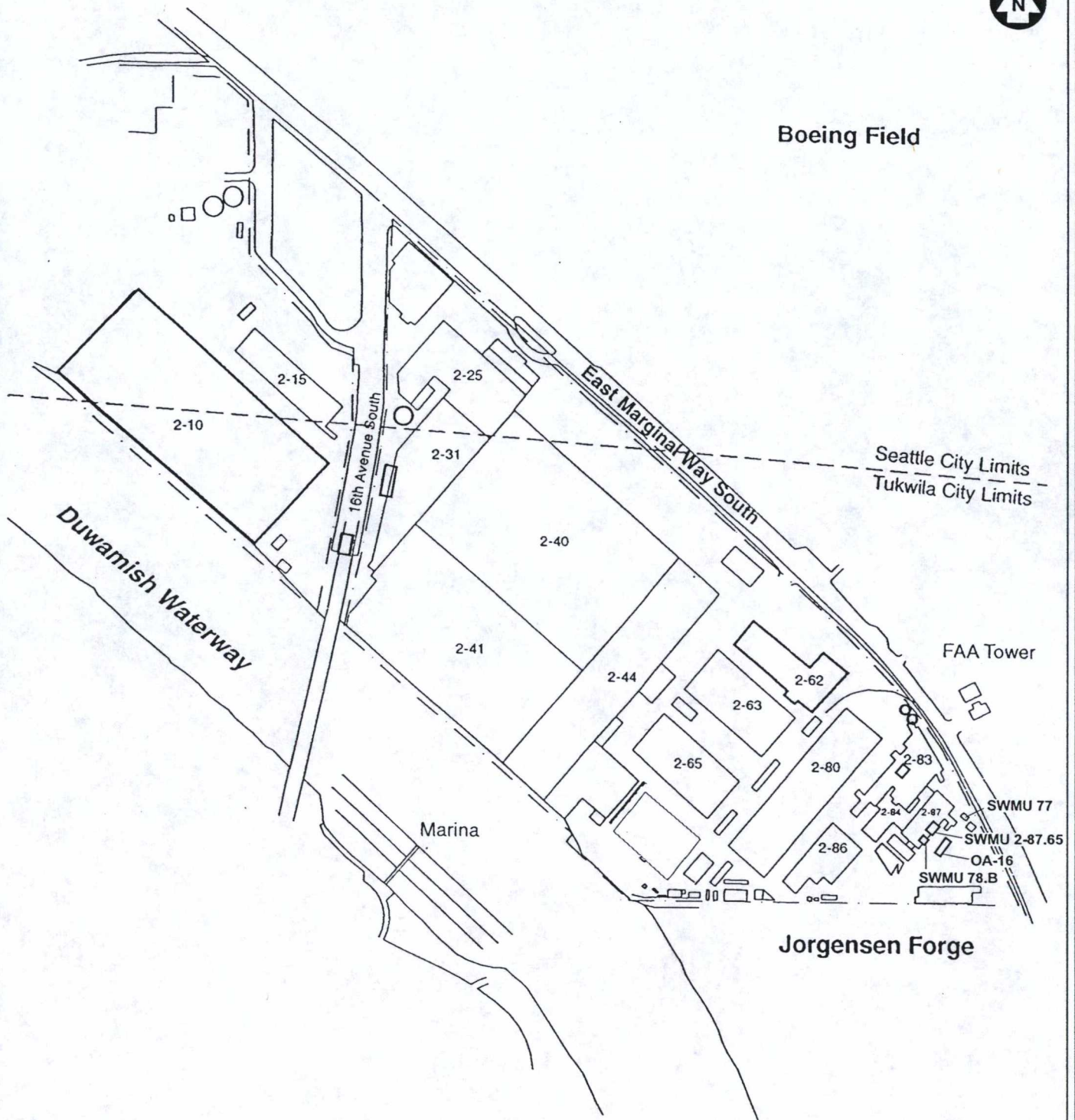
WESTON. 1994a. Closure Certification Report, TSD Areas 1, 2, and 3, Seattle/Tukwila, Washington. Prepared for The Boeing Company, Seattle, WA.

WESTON. 1994b. RCRA Facilities Investigation Work Plan. Prepared for The Boeing Company. Roy F. Weston, Inc., Seattle, WA. November.

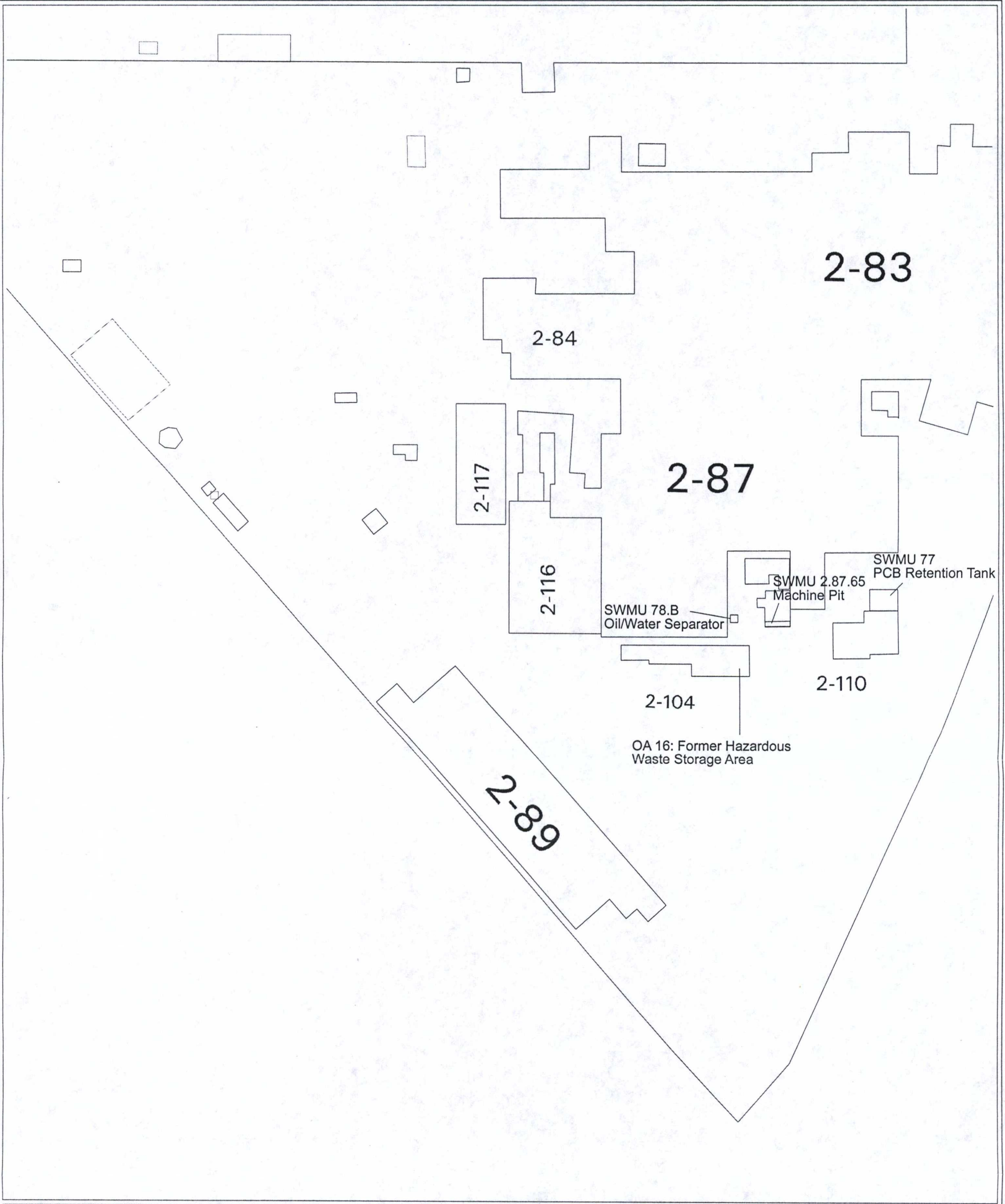
FIGURES



Boeing Field



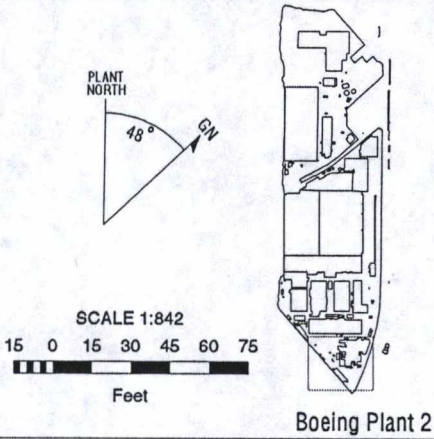
Facility Map



BASEMAP EXPLANATION

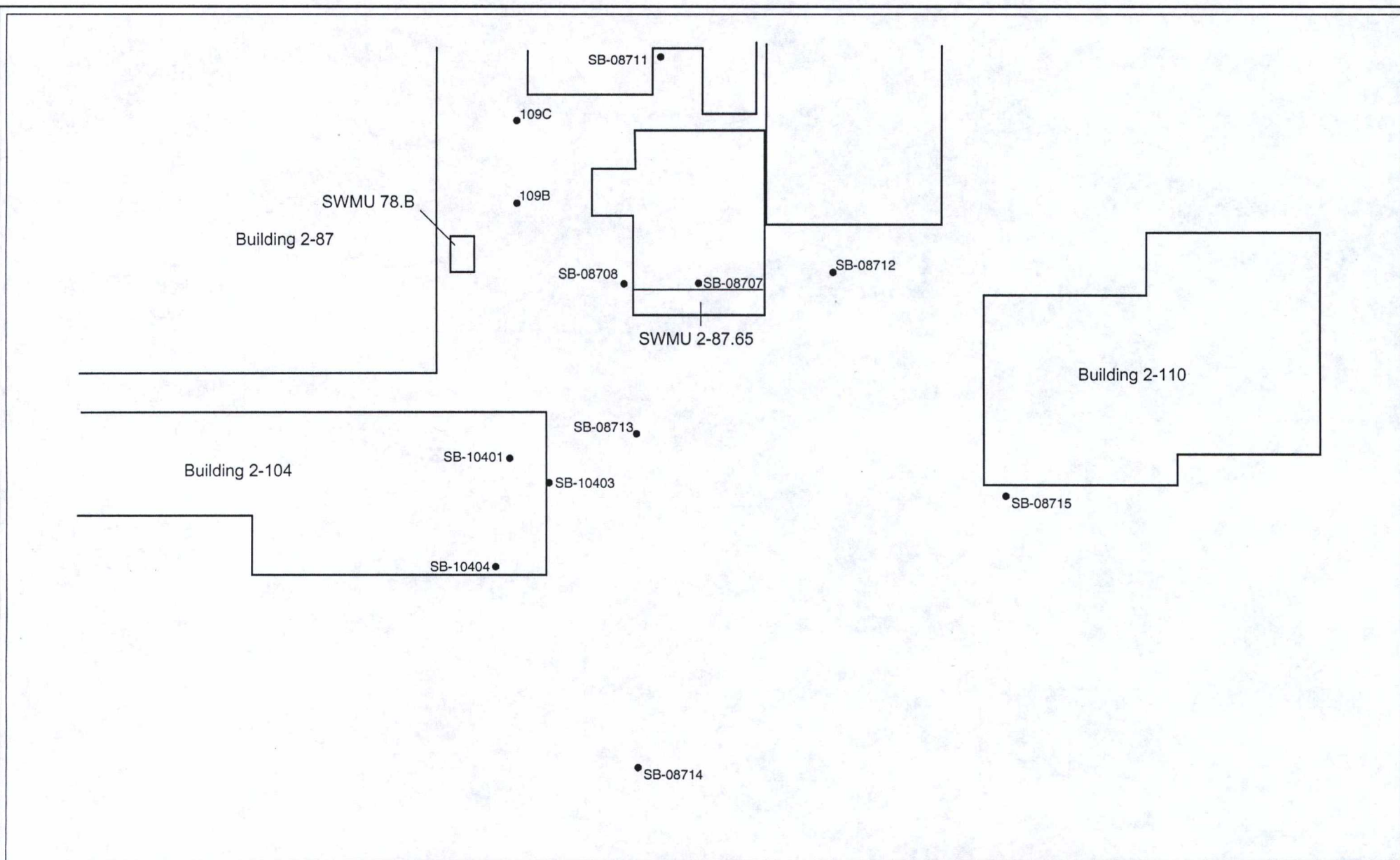
- Facility Boundary
- SWMU/AOC
- Building

NOTES

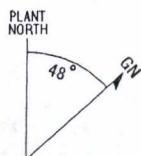


DATE: July 15, 1999 11:24 AM
JOB NUMBER: 03709-034-300-3350-00
LEAD GIS ANALYST: K. Palmer
VIEW FILE: default.view
CHECKED BY: _____
APPROVED BY: _____

SWMU Locations

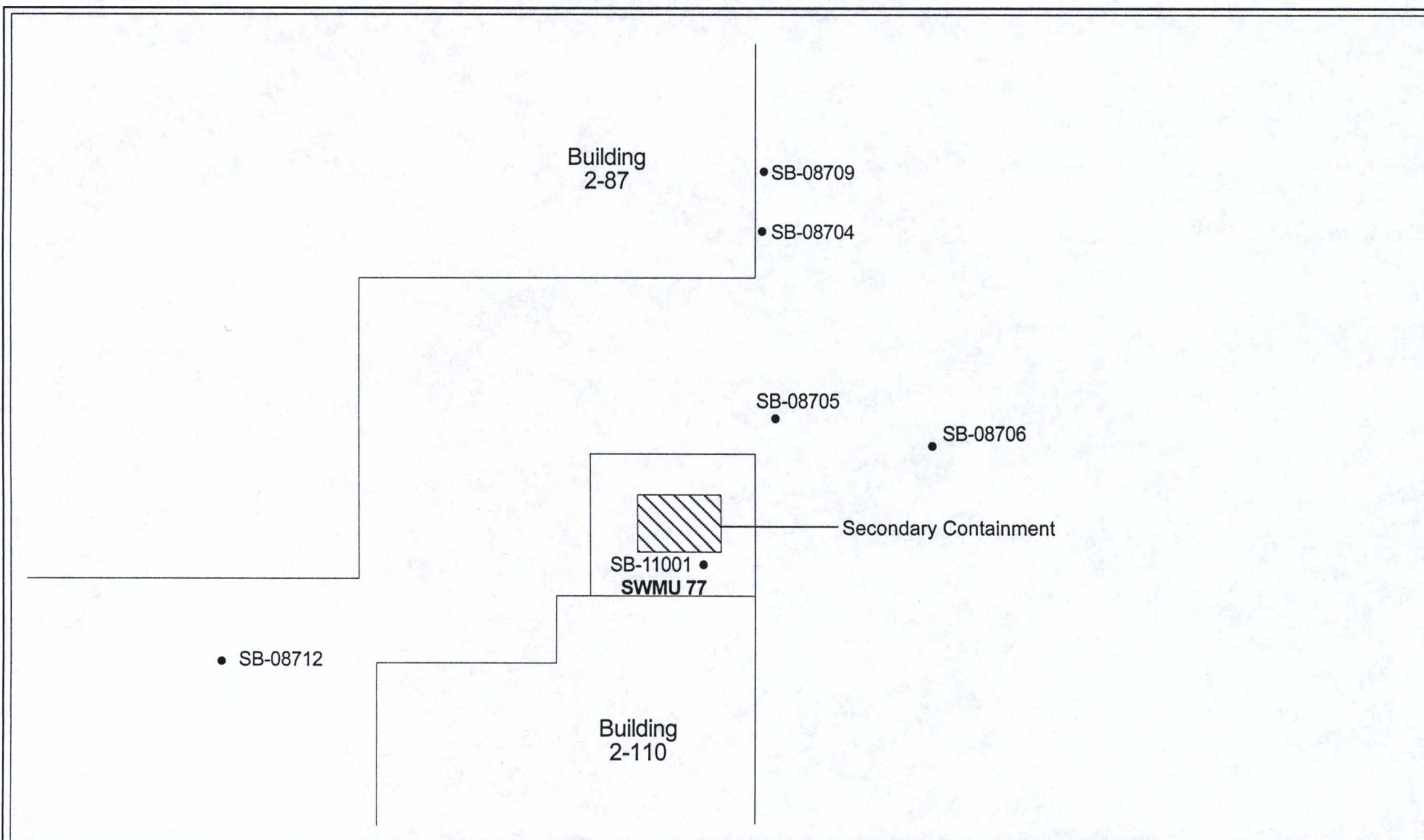


0 10 20
Scale in Feet



SWMUs 2-87.65 Machine Pit and 78.B Oil/Water Separator RFI Sample Locations

• Soil Sample Locations



SWMU 77 Building 2-110 PCB Retention Tank
Sample Locations



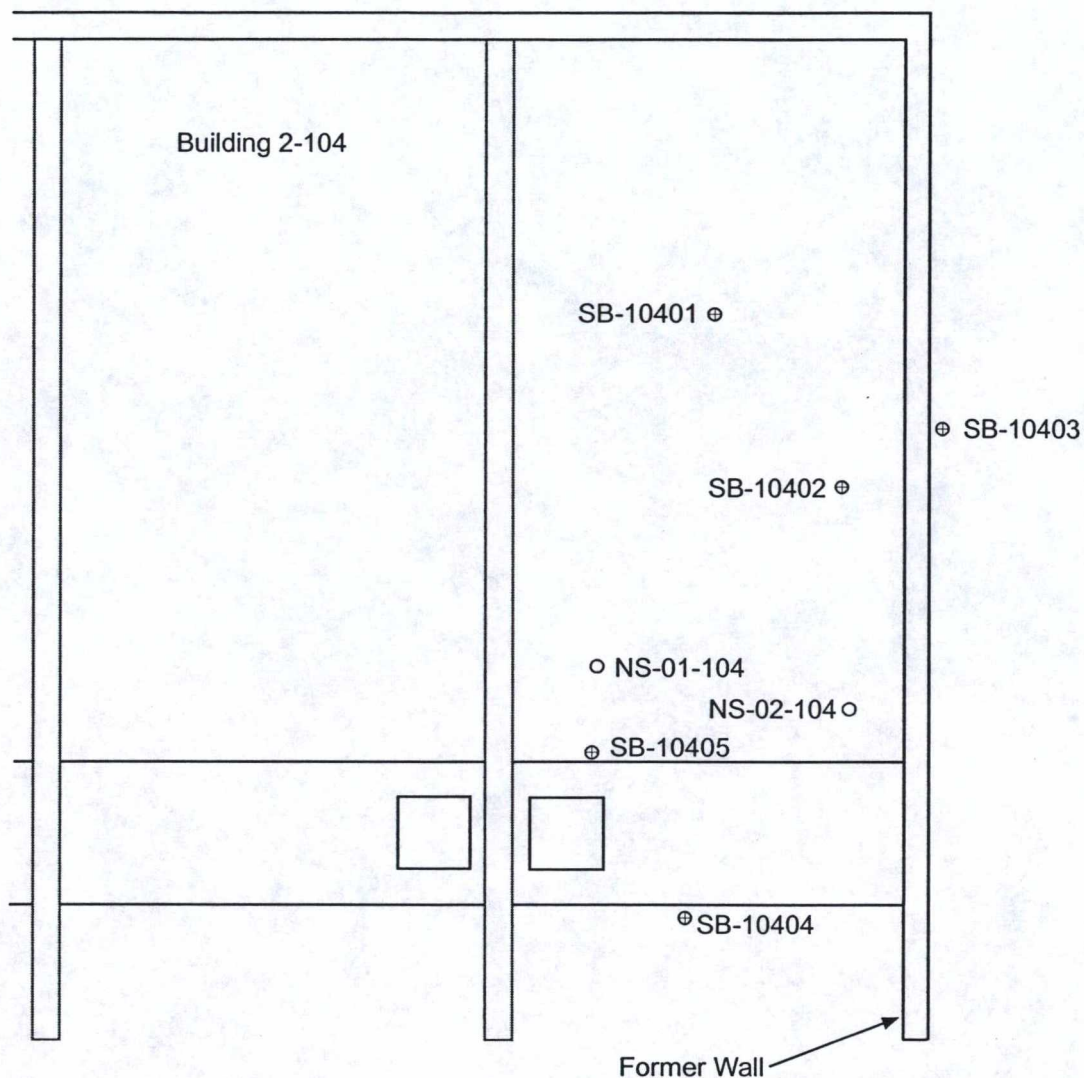
0 10 20
Scale in feet

• Soil Sample Location



Figure

4



0 2 4 6 8



Scale in feet



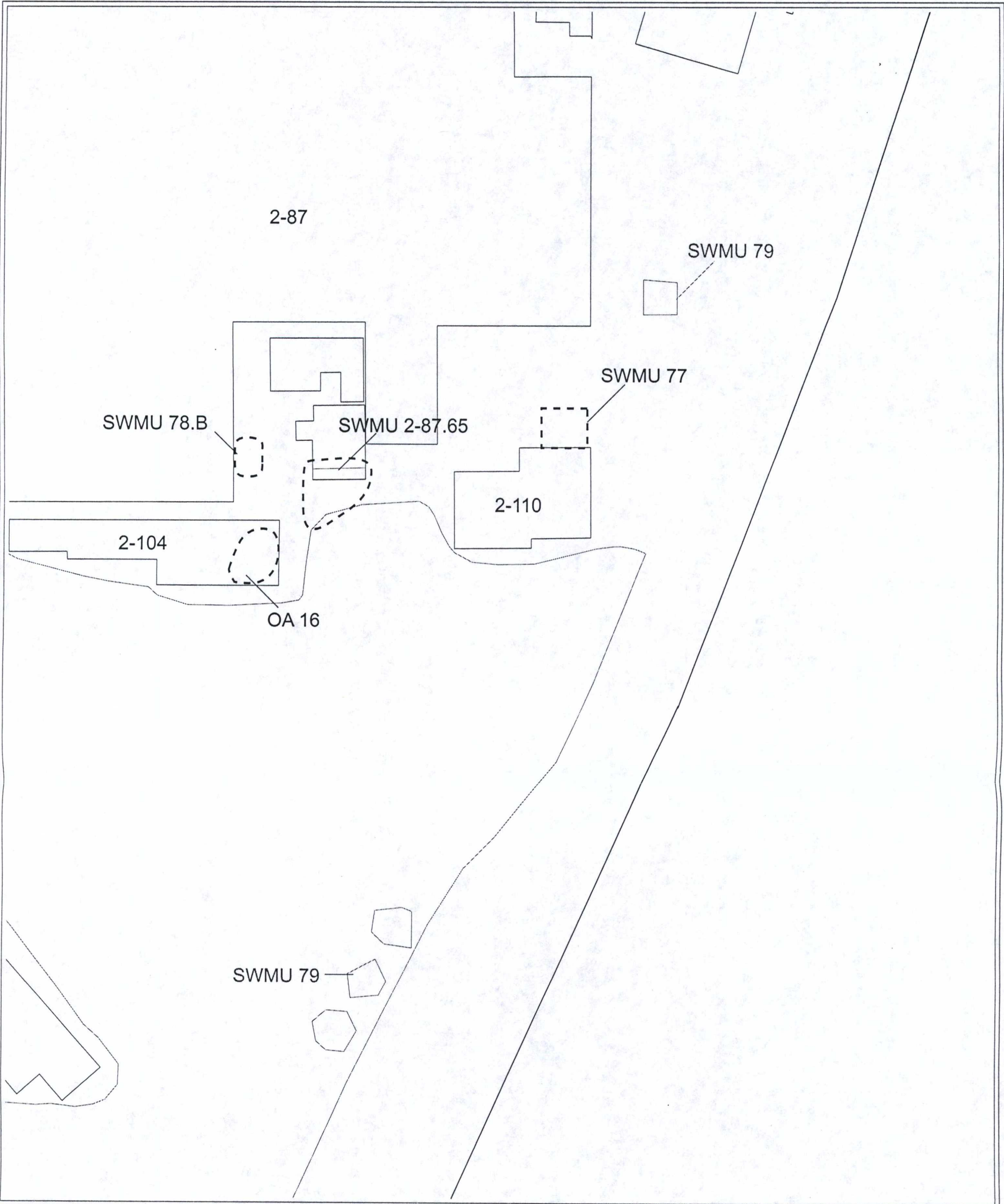
⊕ SB-10401 Subsurface Sample Location

○ NS-01-104 Near Surface Soil Sample

OA-16 Former Hazardous Waste Storage Facility Sample Locations

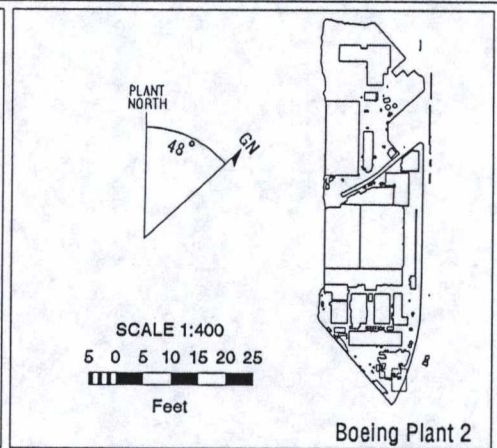
Figure

5



BASEMAP EXPLANATION	
	Facility Boundary
	Proposed Excavation Boundary
	Building

SYMBOL EXPLANATION	
2-110	Building Number



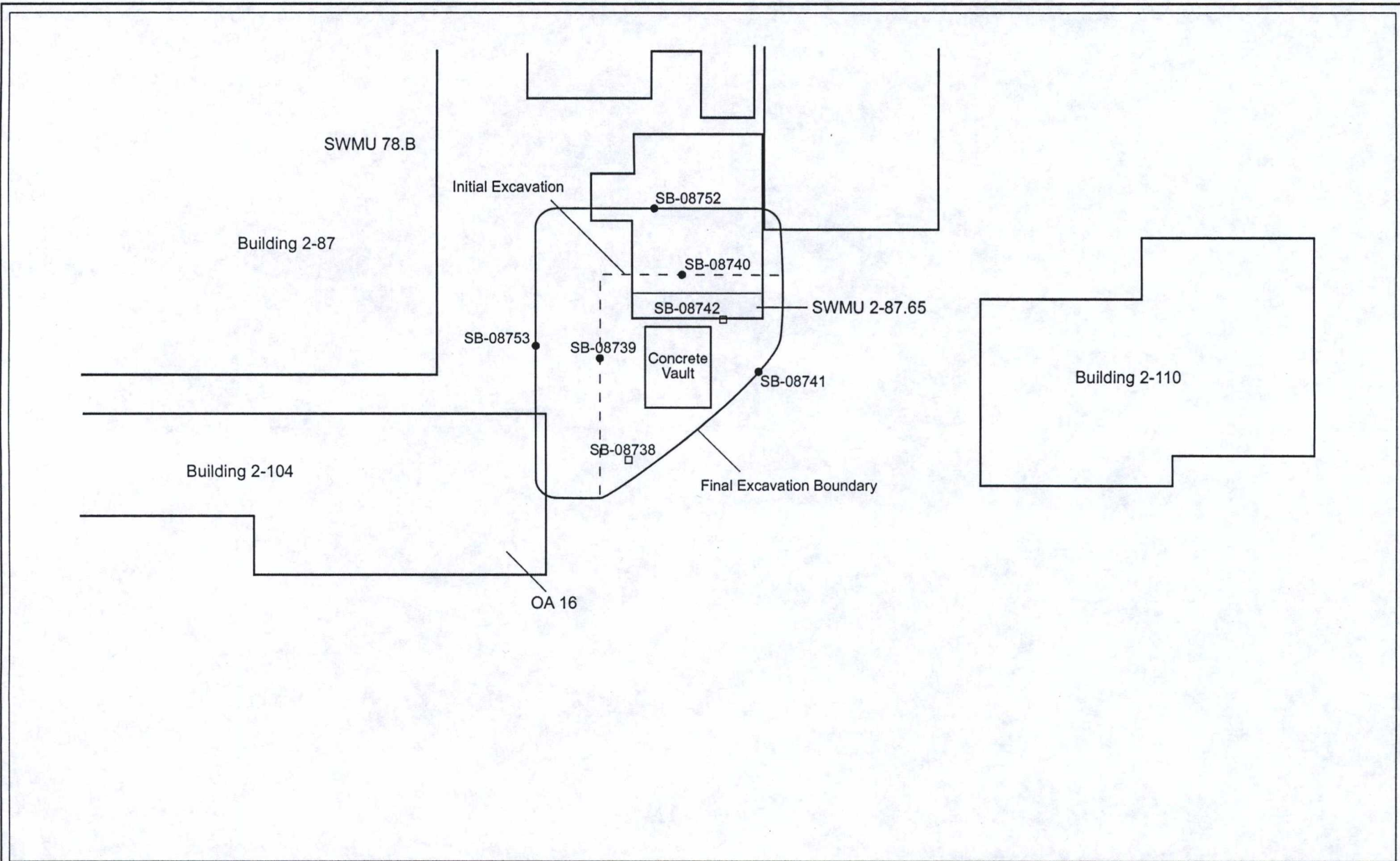
NOTES
1) Excavation boundaries proposed in IM Work Plan.

DATE: August 25, 1999 12:23 PM
JOB NUMBER: 03709-034-470-0010
LEAD GIS ANALYST: K. Palmer
VIEW FILE: 480-0002stns.view

CHECKED BY: _____
APPROVED BY: _____

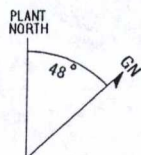
Proposed Excavation Boundaries

Figure 6



0 10 20

Scale in Feet

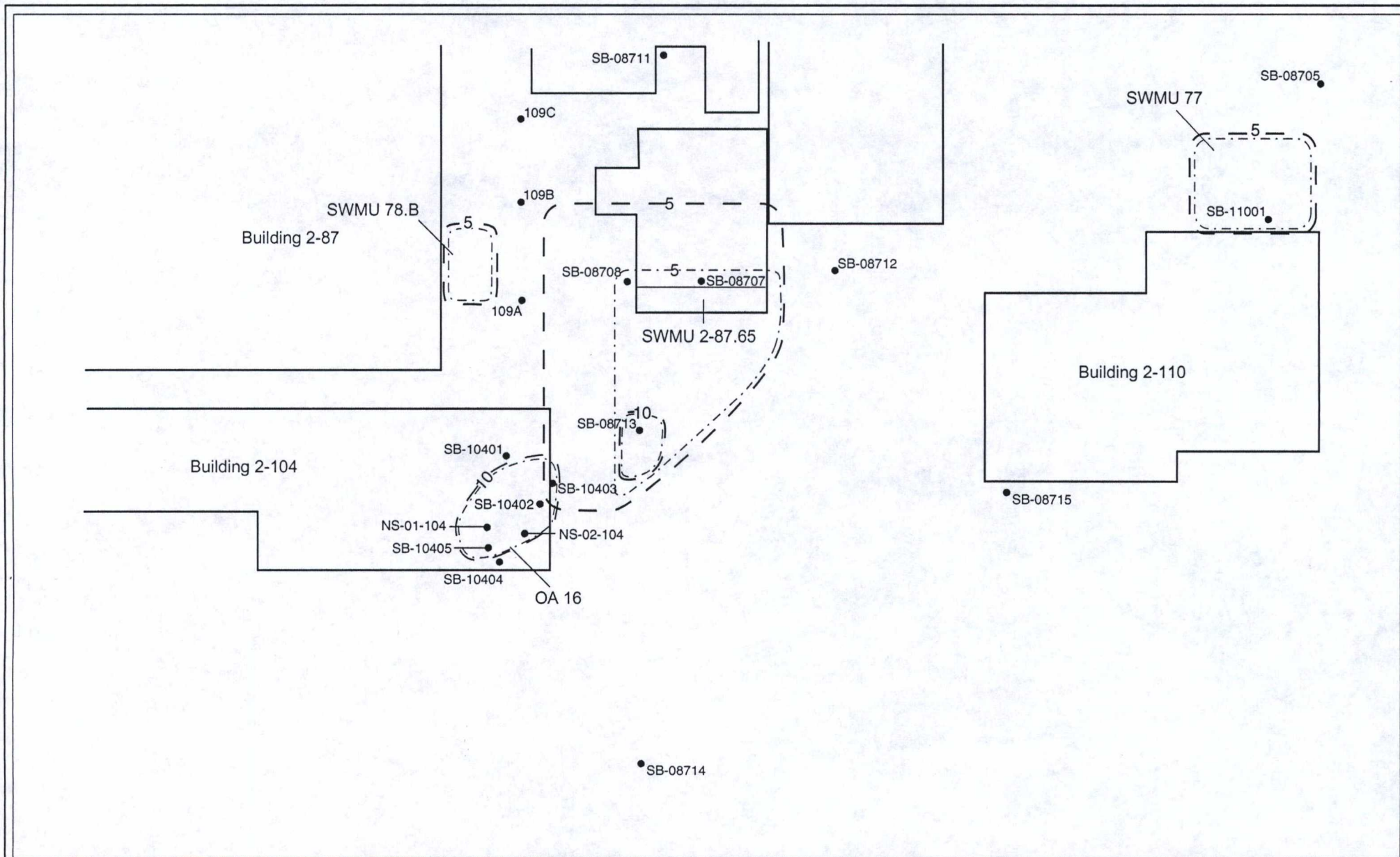


- Sidewall Confirmatory Sample
- Bottom Confirmatory Sample

SWMU 2-87.65 Machine Pit Confirmatory Sample Locations

Figure

7



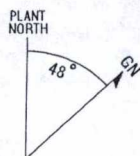
Proposed and Final Excavation Boundaries

Figure

8

0 10 20

Scale in Feet



—10— Excavation Depth

• RFI Soil Sample

—10— Final Excavation

- - - - - Proposed Excavation

Building 2-87

SWMU 78.B

SB-08729

SB-08728

SB-08730

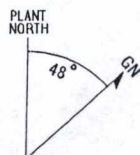
SB-08732

SB-08731

Excavation Boundary

0 5 10

Scale in Feet

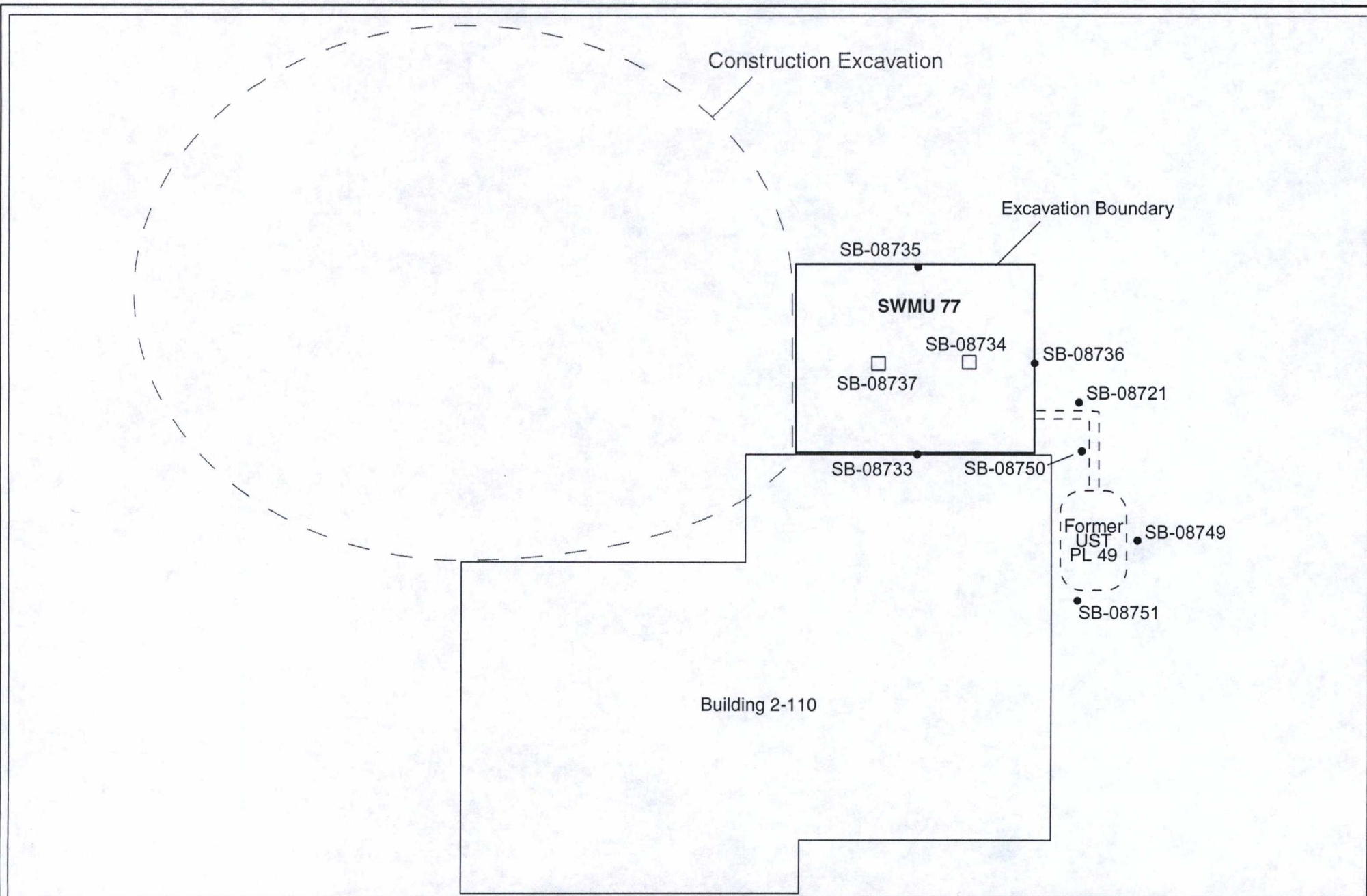


- Sidewall Confirmatory Sample
- Bottom Confirmatory Sample

SWMU 2-78.B Oil/Water Separator Confirmatory Sample Locations

Figure

9



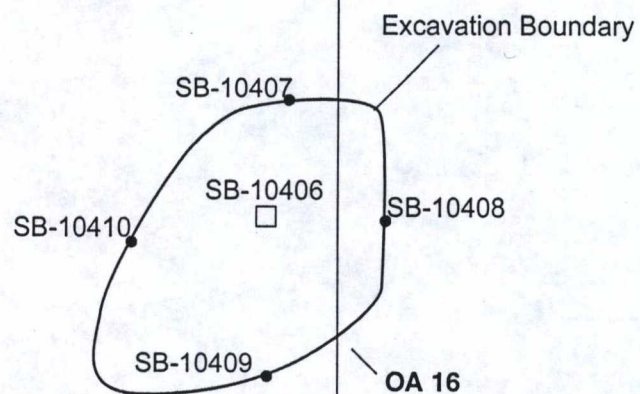
**SWMU 77 Building 2-110 PCB Retention Tank
Confirmatory Sample Locations**

Figure

10

Building 2-87

Building 2-104



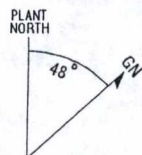
OA 16 Former Hazardous Waste Storage Facility Confirmatory Sample Locations

Figure

11

0 5 10

Scale in Feet



- Sidewall Confirmatory Sample
- Bottom Confirmatory Sample

APPENDIX A
EPA APPROVAL LETTER



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 10

1200 Sixth Avenue
Seattle, Washington 98101

February 8, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Rudolph Rogers, Jr.
Renton Division Environmental Affairs (Plant 2)
Boeing Commercial Airplane Group
P.O. Box 3707, MS 19-35
Seattle, WA 98124-2207

RE: Interim Measures Work plan - SWMU 2-87.65 Machine Pit, SWMU 77 PCB Retention Tank, SWMU 78B Oil/Water Separator, and OA 16 Former Hazardous Waste Storage Facility
EPA ID No. WAD 00925 6819 - RCRA Docket No. 1092-01-22-3008(h)

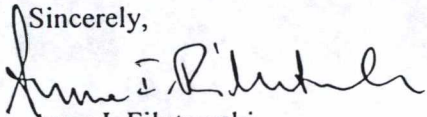
Dear Mr. Rogers:

The United States Environmental Protection Agency (EPA) has completed review of the revised *SWMU 2-87.65 Machine Pit, SWMU 77 PCB Retention Tank, SWMU 78B Oil/Water Separator, and OA 16 Former Hazardous Waste Storage Facility Interim Measures Work Plan (IM)*, dated December 1998. EPA has also completed review of Boeing's responses to EPA's comments on the *Draft IM Work Plan* submitted to EPA for review in October 1998.

In most part, Boeing has adequately addressed EPA concerns and comments as demonstrated by the additional language in the revised *IM Work Plan*, and Boeing's responses dated December 16, 1998 to EPA comments on the *Draft IM Work Plan* (October 1998). As such, in accordance with Section X of the Agreed Order dated January 1994, EPA approves the *IM Work Plan* as final with the following stipulation:

1. In Section 6.4 Confirmatory Soil Sampling, Boeing has agreed to additional excavation "as practical" if confirmatory samples indicate that cleanup levels have not been attained. The issue to continue excavation "as practical" needs to be resolved prior to completion of the interim measures in this area. In the event confirmatory samples exceed the cleanup levels, and Boeing determines that further excavation is "not practical", Boeing must obtain EPA's concurrence in writing that such determination is acceptable for this interim measure.

We appreciate Boeing's commitment to clean up the environment and continued cooperative and open relationship with the Agency. Should you have any question, please call me at 206/553-5122.

Sincerely,

Anna I. Filutowski
Project Manager

cc: Hideo Fujita, Ecology - NWRO

APPENDIX B
RFI SOIL ANALYTICAL DATA

Soil Report for SWMU 2-87.65 (Includes SWMU 78.B)

Station ID:	PL2-109B	PL2-109B	PL2-109B	PL2-109C	PL2-109C	PL2-109C
Sample ID:	L09-MW109B-14	L09-MW109B-45	L09-MW109B-9	L09-MW109C-14	L09-MW109C-45	L09-MW109C-6
Constituent Depth (ft bgs):	14	45	9	14	45	6
Volatile Organic Compounds (ug/kg)						
1,1,1-Trichloroethane	20.0000	1.3000 U	13.0000	1.8000	1.4000 U	2.3000
1,1,2,2-Tetrachloroethane	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
1,1,2-Trichloroethane	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
1,1,2-Trichlorotrifluoroethane	8.1000 U	2.7000 U	2.5000 U	4.6000	2.8000 U	2.4000 U
1,1-Dichloroethane	120.0000	1.3000 U	240.0000	4.3000	1.4000 U	1.2000 U
1,1-Dichloroethene	4.0000 U	1.3000 U	8.1000	1.3000 U	1.4000 U	1.2000 U
1,2-Dichloroethane	5.9000	1.3000 U	35.0000	1.3000 U	1.4000 U	1.2000 U
1,2-Dichloropropane	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
2-Butanone	20.0000 U	6.7000 U	6.3000 U	6.4000 U	7.0000 U	6.1000 U
2-Chloroethylvinylether	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
2-Hexanone	20.0000 U	6.7000 U	6.3000 U	6.4000 U	7.0000 U	6.1000 U
4-Methyl-2-Pentanone	20.0000 U	6.7000 U	6.3000 U	6.4000 U	7.0000 U	6.1000 U
Acetone	20.0000 U	14.0000 B	24.0000	19.0000 B	15.0000 B	6.9000 B
Benzene	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Bromodichloromethane	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Bromoform	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Bromomethane	8.1000 U	2.7000 U	2.5000 U	2.5000 U	2.8000 U	2.4000 U
Carbon Disulfide	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Carbon Tetrachloride	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Chlorobenzene	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Chloroethane	8.1000 U	2.7000 U	2.5000 U	2.5000 U	2.8000 U	2.4000 U
Chloroform	4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Chloromethane	8.1000 U	2.7000 U	2.5000 U	2.5000 U	2.8000 U	2.4000 U
cis-1,2-Dichloroethene	170.0000	1.3000 U	780.0000	6.7000	1.4000 U	1.2000 U

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109B	PL2-109B	PL2-109B	PL2-109C	PL2-109C	PL2-109C
	Sample ID:	L09-MW109B-14	L09-MW109B-45	L09-MW109B-9	L09-MW109C-14	L09-MW109C-45	L09-MW109C-6
Depth (ft bgs):		14	45	9	14	45	6
cis-1,3-Dichloropropene		4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Dibromochloromethane		4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Ethylbenzene		4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
m,p-Xylene							
Methylene Chloride		8.1000 U	2.7000 U	2.5000 U	1.3000 U	3.5000 B	1.2000 U
o-Xylene							
Styrene		4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Tetrachloroethene		6.3000	1.3000 U	3.7000	1.6000	1.4000 U	6.5000
Toluene		4.0000 U	1.3000 U	5.1000	1.3000 U	1.4000 U	2.1000
Total Xylene		8.1000 U	2.7000 U	2.5000 U	2.5000 U	2.8000 U	1.2000 J
trans-1,2-Dichloroethene		4.4000	1.3000 U	43.0000	1.3000 U	1.4000 U	1.2000 U
trans-1,3-Dichloropropene		4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Trichloroethene		260.0000	1.3000 U	480.0000	24.0000	1.4000 U	58.0000
Trichlorofluoromethane		8.1000 U	2.7000 U	2.5000 U	2.5000 U	2.8000 U	2.4000 U
Vinyl Acetate		4.0000 U	1.3000 U	1.3000 U	1.3000 U	1.4000 U	1.2000 U
Vinyl Chloride		8.1000 U	2.7000 U	32.0000	2.5000 U	2.8000 U	2.4000 U
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
1,2-Dichlorobenzene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
1,3-Dichlorobenzene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
1,4-Dichlorobenzene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
2,2'-Oxybis(1-Chloropropane)		26.0000 U		28.0000 U	25.0000 U		26.0000 U
2,4,5-Trichlorophenol		130.0000 U		140.0000 U	120.0000 U		130.0000 U
2,4,6-Trichlorophenol		130.0000 U		140.0000 U	120.0000 U		130.0000 U
2,4-Dichlorophenol		78.0000 U		83.0000 U	74.0000 U		76.0000 U

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109B	PL2-109B	PL2-109B	PL2-109C	PL2-109C	PL2-109C
	Sample ID:	L09-MW109B-14	L09-MW109B-45	L09-MW109B-9	L09-MW109C-14	L09-MW109C-45	L09-MW109C-6
	Depth (ft bgs):	14	45	9	14	45	6
2,4-Dimethylphenol		52.0000 U		56.0000 U	49.0000 U		51.0000 U
2,4-Dinitrophenol		260.0000 U		280.0000 U	250.0000 U		250.0000 U
2,4-Dinitrotoluene		130.0000 U		140.0000 U	120.0000 U		130.0000 U
2,6-Dinitrotoluene		130.0000 U		140.0000 U	120.0000 U		130.0000 U
2-Chloronaphthalene		26.0000 U		28.0000 U	6700.0000		26.0000 U
2-Chlorophenol		26.0000 U		28.0000 U	25.0000 U		26.0000 U
2-Methylnaphthalene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
2-Methylphenol		26.0000 U		28.0000 U	25.0000 U		26.0000 U
2-Nitroaniline		130.0000 U		140.0000 U	120.0000 U		130.0000 U
2-Nitrophenol		130.0000 U		140.0000 U	120.0000 U		130.0000 U
3,3'-Dichlorobenzidine		130.0000 U		140.0000 U	120.0000 U		130.0000 U
3-Nitroaniline		130.0000 U		140.0000 U	120.0000 U		130.0000 U
4,6-Dinitro-2-methylphenol		260.0000 U		280.0000 U	250.0000 U		250.0000 U
4-Bromophenyl-phenylether		26.0000 U		28.0000 U	25.0000 U		26.0000 U
4-Chloro-3-methylphenol		52.0000 U		56.0000 U	49.0000 U		51.0000 U
4-Chloroaniline		78.0000 U		83.0000 U	74.0000 U		76.0000 U
4-Chlorophenyl-phenylether		26.0000 U		28.0000 U	25.0000 U		26.0000 U
4-Methylphenol		26.0000 U		28.0000 U	25.0000 U		26.0000 U
4-Nitroaniline		130.0000 U		140.0000 U	120.0000 U		130.0000 U
4-Nitrophenol		130.0000 U		140.0000 U	120.0000 U		130.0000 U
Acenaphthene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Acenaphthylene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Anthracene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Benzo(a)anthracene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Benzo(a)pyrene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Benzo(b)fluoranthene		26.0000 U		28.0000 U	25.0000 U		26.0000 U

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109B	PL2-109B	PL2-109B	PL2-109C	PL2-109C	PL2-109C
	Sample ID:	L09-MW109B-14	L09-MW109B-45	L09-MW109B-9	L09-MW109C-14	L09-MW109C-45	L09-MW109C-6
	Depth (ft bgs):	14	45	9	14	45	6
Benzo(g,h,i)perylene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Benzo(k)fluoranthene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Benzoic acid		260.0000 U		280.0000 U	250.0000 U		250.0000 U
Benzyl alcohol		130.0000 U		140.0000 U	120.0000 U		130.0000 U
bis(2-Chloroethoxy)methane		26.0000 U		28.0000 U	25.0000 U		26.0000 U
bis(2-Chloroethyl)ether		26.0000 U		28.0000 U	25.0000 U		26.0000 U
bis(2-Ethylhexyl)phthalate		26.0000 U		28.0000 U	41.0000		26.0000 U
Butylbenzylphthalate		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Carbazole		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Chrysene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Di-n-butylphthalate		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Di-n-octylphthalate		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Dibenz(a,h)anthracene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Dibenzofuran		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Diethylphthalate		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Dimethylphthalate		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Fluoranthene		26.0000 U		14.0000 J	27.0000		26.0000 U
Fluorene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Hexachlorobenzene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Hexachlorobutadiene		52.0000 U		56.0000 U	49.0000 U		51.0000 U
Hexachlorocyclopentadiene		130.0000 U		140.0000 U	120.0000 U		130.0000 U
Hexachloroethane		52.0000 U		56.0000 U	49.0000 U		51.0000 U
Indeno(1,2,3-cd)pyrene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Isophorone		26.0000 U		28.0000 U	25.0000 U		26.0000 U
N-Nitroso-di-n-propylamine		26.0000 U		28.0000 U	25.0000 U		26.0000 U
N-Nitrosodiphenylamine		26.0000 U		28.0000 U	25.0000 U		26.0000 U

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	PL2-109B	PL2-109B	PL2-109B	PL2-109C	PL2-109C	PL2-109C
	Sample ID:	L09-MW109B-14	L09-MW109B-45	L09-MW109B-9	L09-MW109C-14	L09-MW109C-45	L09-MW109C-6
Constituent	Depth (ft bgs):	14	45	9	14	45	6
Naphthalene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Nitrobenzene		26.0000 U		28.0000 U	25.0000 U		26.0000 U
Pentachlorophenol		130.0000 U		140.0000 U	120.0000 U		130.0000 U
Phenanthrene		26.0000 U		28.0000 U	23.0000 J		26.0000 U
Phenol		52.0000 U		56.0000 U	49.0000 U		51.0000 U
Pyrene		26.0000 U		14.0000 J	26.0000		26.0000 U
Pesticides/PCBs (ug/kg)							
Aroclor 1016							
Aroclor 1016/1242		15.0000 U		15.0000 U	300.0000 U		15.0000 U
Aroclor 1242							
Aroclor 1248		15.0000 U		15.0000 U	300.0000 U		15.0000 U
Aroclor 1254		15.0000 U		15.0000 U	140.0000		15.0000 U
Aroclor 1260		15.0000 U		15.0000 U	34.0000		15.0000 U
Total PCB		15.0000 UT		15.0000 UT	174.0000 T		15.0000 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range							
Gas Range							
Oil Range							
TPH by 418.1							
TPH by Washington HCID 8015		10.0000 U		10.0000 U	290.0000		10.0000 U
Inorganics (Total) (mg/kg)							
Aluminum							
Antimony							
Arsenic		1.3000	1.7000	4.0000	1.2000	1.7000	3.2000
Barium							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109B	PL2-109B	PL2-109B	PL2-109C	PL2-109C	PL2-109C
	Sample ID:	L09-MW109B-14	L09-MW109B-45	L09-MW109B-9	L09-MW109C-14	L09-MW109C-45	L09-MW109C-6
	Depth (ft bgs):	14	45	9	14	45	6
Beryllium							
Cadmium		0.3000 U	0.3000 U	0.3000 U	0.3000 U	0.3000 U	0.3000 U
Calcium							
Chromium		12.0000	13.7000	19.5000	12.1000	13.1000	11.8000
Chromium VI							
Cobalt							
Copper		10.9000	14.2000	24.1000	9.5000	16.5000	12.2000
Cyanide							
Iron							
Lead		3.0000 U	3.0000 U	8.0000	3.0000 U	3.0000 U	6.0000
Magnesium							
Manganese							
Mercury		0.1000 U	0.1000 U	0.1000 U	0.0500 U	0.0500 U	0.1000 U
Nickel							
Potassium							
Selenium		0.1000 U	0.1000 U	0.1000 U	0.2000	0.2000	0.3000
Silver							
Sodium							
Thallium		0.1000 U	0.1000 U	0.1000 U	0.1000 U	0.1000 U	0.1000 U
Vanadium							
Zinc		21.7000	19.8000	40.1000	20.8000	22.5000	20.4000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Station ID:	PL2-109C	PL2-109C	SB-08707	SB-08707	SB-08708	SB-08708
Sample ID:	L09-MW109C-71	L09-MW109C-9	SB-08707-0030	SB-08707-1030	SB-08708-0030	SB-08708-1030
Constituent	Depth (ft bgs):	71.5	9	3 to N/A	3 to N/A	3 to N/A
Volatile Organic Compounds (ug/kg)						
1,1,1-Trichloroethane		1.4000 U	1.3000 U	1.1000 U	1.8000	
1,1,2,2-Tetrachloroethane		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
1,1,2-Trichloroethane		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
1,1,2-Trichlorotrifluoroethane		2.9000 U	2.7000 U	2.2000 U	2.1000 U	
1,1-Dichloroethane		1.4000 U	6.7000	1.1000 U	1.1000 U	
1,1-Dichloroethene		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
1,2-Dichloroethane		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
1,2-Dichloropropane		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
2-Butanone		7.1000 U	6.7000 U	5.5000 U	5.4000 U	
2-Chloroethylvinylether		1.4000 U	1.3000 U	5.5000 U	5.4000 U	
2-Hexanone		7.1000 U	6.7000 U	5.5000 U	5.4000 U	
4-Methyl-2-Pentanone		7.1000 U	6.7000 U	5.5000 U	5.4000 U	
Acetone		12.0000 B	16.0000 B	5.5000 U	5.4000 U	
Benzene		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Bromodichloromethane		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Bromoform		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Bromomethane		2.9000 U	2.7000 U	2.2000 U	2.1000 U	
Carbon Disulfide		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Carbon Tetrachloride		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Chlorobenzene		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Chloroethane		2.9000 U	2.7000 U	2.2000 U	2.1000 U	
Chloroform		1.4000 U	1.3000 U	1.1000 U	1.1000 U	
Chloromethane		2.9000 U	2.7000 U	2.2000 U	2.1000 U	
cis-1,2-Dichloroethene		1.4000 U	2.4000	1.1000 U	1.2000	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109C	PL2-109C	SB-08707	SB-08707	SB-08708	SB-08708
	Sample ID:	L09-MW109C-71	L09-MW109C-9	SB-08707-0030	SB-08707-1030	SB-08708-0030	SB-08708-1030
Depth (ft bgs):		71.5	9	3 to N/A	3 to N/A	3 to N/A	3 to N/A
cis-1,3-Dichloropropene		1.4000 U	1.3000 U	1.1000 U		1.1000 U	
Dibromochloromethane		1.4000 U	1.3000 U	1.1000 U		1.1000 U	
Ethylbenzene		1.4000 U	1.3000 U	1.1000 U		1.1000 U	
m,p-Xylene				1.1000 U		1.1000 U	
Methylene Chloride		3.2000 B	1.3000 U	2.2000 U		2.1000 U	
o-Xylene				1.1000 U		1.1000 U	
Styrene		1.4000 U	1.3000 U	1.1000 U		1.1000 U	
Tetrachloroethene		1.4000 U	1.3000 U	4.2000		7.2000	
Toluene		1.4000 U	1.3000 U	1.1000 U		2.0000	
Total Xylene		2.9000 U	2.7000 U				
trans-1,2-Dichloroethene		1.4000 U	1.3000 U	1.1000 U		1.1000 U	
trans-1,3-Dichloropropene		1.4000 U	1.3000 U	1.1000 U		1.1000 U	
Trichloroethene		1.4000 U	18.0000	23.0000		47.0000	
Trichlorofluoromethane		2.9000 U	2.7000 U	2.2000 U		2.1000 U	
Vinyl Acetate		1.4000 U	1.3000 U	5.5000 U		5.4000 U	
Vinyl Chloride		2.9000 U	2.7000 U	2.2000 U		2.1000 U	
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
1,2-Dichlorobenzene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
1,3-Dichlorobenzene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
1,4-Dichlorobenzene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
2,2'-Oxybis(1-Chloropropane)			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
2,4,5-Trichlorophenol			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
2,4,6-Trichlorophenol			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
2,4-Dichlorophenol			80.0000 U	230.0000 U	230.0000 U	220.0000 U	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109C	PL2-109C	SB-08707	SB-08707	SB-08708	SB-08708
	Sample ID:	L09-MW109C-71	L09-MW109C-9	SB-08707-0030	SB-08707-1030	SB-08708-0030	SB-08708-1030
	Depth (ft bgs):	71.5	9	3 to N/A	3 to N/A	3 to N/A	3 to N/A
2,4-Dimethylphenol			53.0000 U	230.0000 U	230.0000 U	220.0000 U	
2,4-Dinitrophenol			270.0000 U	750.0000 U	760.0000 U	720.0000 U	
2,4-Dinitrotoluene			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
2,6-Dinitrotoluene			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
2-Chloronaphthalene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
2-Chlorophenol			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
2-Methylnaphthalene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
2-Methylphenol			27.0000 U	150.0000 U	150.0000 U	140.0000 U	
2-Nitroaniline			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
2-Nitrophenol			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
3,3'-Dichlorobenzidine			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
3-Nitroaniline			130.0000 U	450.0000 U	460.0000 U	430.0000 U	
4,6-Dinitro-2-methylphenol			270.0000 U	750.0000 U	760.0000 U	720.0000 U	
4-Bromophenyl-phenylether			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
4-Chloro-3-methylphenol			53.0000 U	150.0000 U	150.0000 U	140.0000 U	
4-Chloroaniline			80.0000 U	230.0000 U	230.0000 U	220.0000 U	
4-Chlorophenyl-phenylether			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
4-Methylphenol			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
4-Nitroaniline			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
4-Nitrophenol			130.0000 U	380.0000 U	380.0000 U	360.0000 U	
Acenaphthene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
Acenaphthylene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
Anthracene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
Benzo(a)anthracene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
Benzo(a)pyrene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	
Benzo(b)fluoranthene			27.0000 U	75.0000 U	76.0000 U	72.0000 U	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Station ID:	PL2-109C	PL2-109C	SB-08707	SB-08707	SB-08708	SB-08708
Sample ID:	L09-MW109C-71	L09-MW109C-9	SB-08707-0030	SB-08707-1030	SB-08708-0030	SB-08708-1030
Constituent	Depth (ft bgs):	71.5	9	3 to N/A	3 to N/A	3 to N/A
Benzo(g,h,i)perylene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Benzo(k)fluoranthene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Benzoic acid			270.0000 U	750.0000 U	760.0000 U	720.0000 U
Benzyl alcohol			130.0000 U	380.0000 U	380.0000 U	360.0000 U
bis(2-Chloroethoxy)methane			27.0000 U	75.0000 U	76.0000 U	72.0000 U
bis(2-Chloroethyl)ether			27.0000 U	150.0000 U	150.0000 U	140.0000 U
bis(2-Ethylhexyl)phthalate			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Butylbenzylphthalate			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Carbazole			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Chrysene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Di-n-butylphthalate			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Di-n-octylphthalate			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Dibenz(a,h)anthracene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Dibenzofuran			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Diethylphthalate			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Dimethylphthalate			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Fluoranthene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Fluorene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Hexachlorobenzene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Hexachlorobutadiene			53.0000 U	150.0000 U	150.0000 U	140.0000 U
Hexachlorocyclopentadiene			130.0000 U	380.0000 U	380.0000 U	360.0000 U
Hexachloroethane			53.0000 U	150.0000 U	150.0000 U	140.0000 U
Indeno(1,2,3-cd)pyrene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Isophorone			27.0000 U	75.0000 U	76.0000 U	72.0000 U
N-Nitroso-di-n-propylamine			27.0000 U	150.0000 U	150.0000 U	140.0000 U
N-Nitrosodiphenylamine			27.0000 U	75.0000 U	76.0000 U	72.0000 U

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Station ID:	PL2-109C	PL2-109C	SB-08707	SB-08707	SB-08708	SB-08708
Sample ID:	L09-MW109C-71	L09-MW109C-9	SB-08707-0030	SB-08707-1030	SB-08708-0030	SB-08708-1030
Constituent	Depth (ft bgs):	71.5	9	3 to N/A	3 to N/A	3 to N/A
Naphthalene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Nitrobenzene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Pentachlorophenol			130.0000 U	380.0000 U	380.0000 U	360.0000 U
Phenanthrene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Phenol			53.0000 U	150.0000 U	150.0000 U	140.0000 U
Pyrene			27.0000 U	75.0000 U	76.0000 U	72.0000 U
Pesticides/PCBs (ug/kg)						
Aroclor 1016				37.0000 U	38.0000 U	36.0000 U
Aroclor 1016/1242			15.0000 U			
Aroclor 1242				110.0000 U	61.0000 U	36.0000 U
Aroclor 1248			15.0000 U	600.0000	700.0000	36.0000 U
Aroclor 1254			15.0000 U	1400.0000	1200.0000	36.0000 U
Aroclor 1260			15.0000 U	220.0000 U	140.0000 U	36.0000 U
Total PCB			15.0000 UT	2000.0000 T	1900.0000 T	36.0000 UT
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range				25.0000 U		25.0000 U
Gas Range				20.0000 U		20.0000 U
Oil Range				50.0000 U		50.0000 U
TPH by 418.1						
TPH by Washington HCID 8015			10.0000 U			
Inorganics (Total) (mg/kg)						
Aluminum				12900.0000	9410.0000	9760.0000
Antimony						
Arsenic		1.8000	2.0000	5.0000 U	5.0000 U	5.0000 U
Barium				38.3000	25.3000	27.1000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	PL2-109C	PL2-109C	SB-08707	SB-08707	SB-08708	SB-08708
	Sample ID:	L09-MW109C-71	L09-MW109C-9	SB-08707-0030	SB-08707-1030	SB-08708-0030	SB-08708-1030
	Depth (ft bgs):	71.5	9	3 to N/A	3 to N/A	3 to N/A	3 to N/A
Beryllium				0.1000 U		0.1000	0.1000
Cadmium		0.3000 U	0.3000 U	0.2000 U		0.2000 U	0.2000 U
Calcium				5650.0000		4500.0000	4770.0000
Chromium		12.0000	15.2000	15.5000 J		11.0000 J	11.0000 J
Chromium VI				0.2300 UJH		0.2200 UJH	
Cobalt				4.2000		3.8000	4.1000
Copper		15.9000	15.5000	12.5000		8.4000	8.5000
Cyanide							
Iron				14200.0000		10700.0000	11100.0000
Lead		3.0000 U	3.0000 U	5.0000 J		7.0000 J	8.0000 J
Magnesium				2370.0000		2200.0000	2200.0000
Manganese				117.0000		101.0000	110.0000
Mercury		0.1000 U	0.0500 U	0.0600 UJ		0.0500 UJ	0.0400 UJ
Nickel				10.0000 J+		9.0000 J+	9.0000 J+
Potassium				780.0000		710.0000	760.0000
Selenium		0.4000	0.3000	5.0000 U		5.0000 U	5.0000 U
Silver				0.3000 U		0.3000 U	0.3000 U
Sodium				1250.0000		830.0000	848.0000
Thallium		0.1000 U	0.1000 U	5.0000 U		6.0000	5.0000 U
Vanadium				48.7000		35.6000	35.4000
Zinc		21.5000	27.3000	26.7000		21.8000	22.6000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08711	SB-08711	SB-08711	SB-08712	SB-08712	SB-08712
	Sample ID:	SB-08711-0020	SB-08711-0070	SB-08711-0100	SB-08712-0020	SB-08712-0065	SB-08712-0085
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	10 to N/A	2 to N/A	6.5 to N/A	8.5 to N/A
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane							
1,1,2,2-Tetrachloroethane							
1,1,2-Trichloroethane							
1,1,2-Trichlorotrifluoroethane							
1,1-Dichloroethane							
1,1-Dichloroethene							
1,2-Dichloroethane							
1,2-Dichloropropane							
2-Butanone							
2-Chloroethylvinylether							
2-Hexanone							
4-Methyl-2-Pentanone							
Acetone							
Benzene							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride							
Chlorobenzene							
Chloroethane							
Chloroform							
Chloromethane							
cis-1,2-Dichloroethene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Station ID:		SB-08711	SB-08711	SB-08711	SB-08712	SB-08712	SB-08712
Sample ID:		SB-08711-0020	SB-08711-0070	SB-08711-0100	SB-08712-0020	SB-08712-0065	SB-08712-0085
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	10 to N/A	2 to N/A	6.5 to N/A	8.5 to N/A
cis-1,3-Dichloropropene							
Dibromochloromethane							
Ethylbenzene							
m,p-Xylene							
Methylene Chloride							
o-Xylene							
Styrene							
Tetrachloroethene							
Toluene							
Total Xylene							
trans-1,2-Dichloroethene							
trans-1,3-Dichloropropene							
Trichloroethene							
Trichlorofluoromethane							
Vinyl Acetate							
Vinyl Chloride							
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene							
1,2-Dichlorobenzene							
1,3-Dichlorobenzene							
1,4-Dichlorobenzene							
2,2'-Oxybis(1-Chloropropane)							
2,4,5-Trichlorophenol							
2,4,6-Trichlorophenol							
2,4-Dichlorophenol							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08711	SB-08711	SB-08711	SB-08712	SB-08712	SB-08712
	Sample ID:	SB-08711-0020	SB-08711-0070	SB-08711-0100	SB-08712-0020	SB-08712-0065	SB-08712-0085
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	10 to N/A	2 to N/A	6.5 to N/A	8.5 to N/A
2,4-Dimethylphenol							
2,4-Dinitrophenol							
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
2-Chloronaphthalene							
2-Chlorophenol							
2-Methylnaphthalene							
2-Methylphenol							
2-Nitroaniline							
2-Nitrophenol							
3,3'-Dichlorobenzidine							
3-Nitroaniline							
4,6-Dinitro-2-methylphenol							
4-Bromophenyl-phenylether							
4-Chloro-3-methylphenol							
4-Chloroaniline							
4-Chlorophenyl-phenylether							
4-Methylphenol							
4-Nitroaniline							
4-Nitrophenol							
Acenaphthene							
Acenaphthylene							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b)fluoranthene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08711	SB-08711	SB-08711	SB-08712	SB-08712	SB-08712
	Sample ID:	SB-08711-0020	SB-08711-0070	SB-08711-0100	SB-08712-0020	SB-08712-0065	SB-08712-0085
	Depth (ft bgs):	2 to N/A	7 to N/A	10 to N/A	2 to N/A	6.5 to N/A	8.5 to N/A
Benzo(g,h,i)perylene							
Benzo(k)fluoranthene							
Benzoic acid							
Benzyl alcohol							
bis(2-Chloroethoxy)methane							
bis(2-Chloroethyl)ether							
bis(2-Ethylhexyl)phthalate							
Butylbenzylphthalate							
Carbazole							
Chrysene							
Di-n-butylphthalate							
Di-n-octylphthalate							
Dibenz(a,h)anthracene							
Dibenzofuran							
Diethylphthalate							
Dimethylphthalate							
Fluoranthene							
Fluorene							
Hexachlorobenzene							
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Hexachloroethane							
Indeno(1,2,3-cd)pyrene							
Isophorone							
N-Nitroso-di-n-propylamine							
N-Nitrosodiphenylamine							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Station ID:		SB-08711	SB-08711	SB-08711	SB-08712	SB-08712	SB-08712
Sample ID:		SB-08711-0020	SB-08711-0070	SB-08711-0100	SB-08712-0020	SB-08712-0065	SB-08712-0085
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	10 to N/A	2 to N/A	6.5 to N/A	8.5 to N/A
Naphthalene							
Nitrobenzene							
Pentachlorophenol							
Phenanthrene							
Phenol							
Pyrene							
Pesticides/PCBs (ug/kg)							
Aroclor 1016		37.0000 U	47.0000 U	43.0000 U	36.0000 U	47.0000 U	46.0000 U
Aroclor 1016/1242							
Aroclor 1242		37.0000 U	47.0000 U	43.0000 U	36.0000 U	47.0000 U	46.0000 U
Aroclor 1248		37.0000 U	47.0000 U	43.0000 U	36.0000 U	47.0000 U	46.0000 U
Aroclor 1254		37.0000 U	47.0000 U	43.0000 U	36.0000 U	47.0000 U	46.0000 U
Aroclor 1260		37.0000 U	47.0000 U	43.0000 U	36.0000 U	47.0000 U	46.0000 U
Total PCB		37.0000 UT	47.0000 UT	43.0000 UT	36.0000 UT	47.0000 UT	46.0000 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range							
Gas Range							
Oil Range							
TPH by 418.1							
TPH by Washington HCID 8015							
Inorganics (Total) (mg/kg)							
Aluminum							
Antimony							
Arsenic							
Barium							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08711	SB-08711	SB-08711	SB-08712	SB-08712	SB-08712
	Sample ID:	SB-08711-0020	SB-08711-0070	SB-08711-0100	SB-08712-0020	SB-08712-0065	SB-08712-0085
	Depth (ft bgs):	2 to N/A	7 to N/A	10 to N/A	2 to N/A	6.5 to N/A	8.5 to N/A
Beryllium							
Cadmium							
Calcium							
Chromium							
Chromium VI							
Cobalt							
Copper							
Cyanide							
Iron							
Lead							
Magnesium							
Manganese							
Mercury							
Nickel							
Potassium							
Selenium							
Silver							
Sodium							
Thallium							
Vanadium							
Zinc							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08713	SB-08713	SB-08713	SB-08714	SB-08714	SB-08714
	Sample ID:	SB-08713-0020	SB-08713-0060	SB-08713-0100	SB-08714-0020	SB-08714-0070	SB-08714-0100
Depth (ft bgs):		2 to N/A	6 to N/A	10 to N/A	2 to N/A	7 to N/A	10 to N/A
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane							
1,1,2,2-Tetrachloroethane							
1,1,2-Trichloroethane							
1,1,2-Trichlorotrifluoroethane							
1,1-Dichloroethane							
1,1-Dichloroethene							
1,2-Dichloroethane							
1,2-Dichloropropane							
2-Butanone							
2-Chloroethylvinylether							
2-Hexanone							
4-Methyl-2-Pentanone							
Acetone							
Benzene							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride							
Chlorobenzene							
Chloroethane							
Chloroform							
Chloromethane							
cis-1,2-Dichloroethene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08713	SB-08713	SB-08713	SB-08714	SB-08714	SB-08714
	Sample ID:	SB-08713-0020	SB-08713-0060	SB-08713-0100	SB-08714-0020	SB-08714-0070	SB-08714-0100
Constituent	Depth (ft bgs):	2 to N/A	6 to N/A	10 to N/A	2 to N/A	7 to N/A	10 to N/A
cis-1,3-Dichloropropene							
Dibromochloromethane							
Ethylbenzene							
m,p-Xylene							
Methylene Chloride							
o-Xylene							
Styrene							
Tetrachloroethene							
Toluene							
Total Xylene							
trans-1,2-Dichloroethene							
trans-1,3-Dichloropropene							
Trichloroethene							
Trichlorofluoromethane							
Vinyl Acetate							
Vinyl Chloride							
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene							
1,2-Dichlorobenzene							
1,3-Dichlorobenzene							
1,4-Dichlorobenzene							
2,2'-Oxybis(1-Chloropropane)							
2,4,5-Trichlorophenol							
2,4,6-Trichlorophenol							
2,4-Dichlorophenol							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08713	SB-08713	SB-08713	SB-08714	SB-08714	SB-08714
	Sample ID:	SB-08713-0020	SB-08713-0060	SB-08713-0100	SB-08714-0020	SB-08714-0070	SB-08714-0100
Constituent	Depth (ft bgs):	2 to N/A	6 to N/A	10 to N/A	2 to N/A	7 to N/A	10 to N/A
2,4-Dimethylphenol							
2,4-Dinitrophenol							
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
2-Chloronaphthalene							
2-Chlorophenol							
2-Methylnaphthalene							
2-Methylphenol							
2-Nitroaniline							
2-Nitrophenol							
3,3'-Dichlorobenzidine							
3-Nitroaniline							
4,6-Dinitro-2-methylphenol							
4-Bromophenyl-phenylether							
4-Chloro-3-methylphenol							
4-Chloroaniline							
4-Chlorophenyl-phenylether							
4-Methylphenol							
4-Nitroaniline							
4-Nitrophenol							
Acenaphthene							
Acenaphthylene							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b)fluoranthene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08713	SB-08713	SB-08713	SB-08714	SB-08714	SB-08714
	Sample ID:	SB-08713-0020	SB-08713-0060	SB-08713-0100	SB-08714-0020	SB-08714-0070	SB-08714-0100
	Depth (ft bgs):	2 to N/A	6 to N/A	10 to N/A	2 to N/A	7 to N/A	10 to N/A
Benzo(g,h,i)perylene							
Benzo(k)fluoranthene							
Benzoic acid							
Benzyl alcohol							
bis(2-Chloroethoxy)methane							
bis(2-Chloroethyl)ether							
bis(2-Ethylhexyl)phthalate							
Butylbenzylphthalate							
Carbazole							
Chrysene							
Di-n-butylphthalate							
Di-n-octylphthalate							
Dibenz(a,h)anthracene							
Dibenzofuran							
Diethylphthalate							
Dimethylphthalate							
Fluoranthene							
Fluorene							
Hexachlorobenzene							
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Hexachloroethane							
Indeno(1,2,3-cd)pyrene							
Isophorone							
N-Nitroso-di-n-propylamine							
N-Nitrosodiphenylamine							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08713	SB-08713	SB-08713	SB-08714	SB-08714	SB-08714
	Sample ID:	SB-08713-0020	SB-08713-0060	SB-08713-0100	SB-08714-0020	SB-08714-0070	SB-08714-0100
	Depth (ft bgs):	2 to N/A	6 to N/A	10 to N/A	2 to N/A	7 to N/A	10 to N/A
Naphthalene							
Nitrobenzene							
Pentachlorophenol							
Phenanthrene							
Phenol							
Pyrene							
Pesticides/PCBs (ug/kg)							
Aroclor 1016		38.0000 U	47.0000 U	43.0000 U	42.0000 U	48.0000 U	43.0000 U
Aroclor 1016/1242							
Aroclor 1242		38.0000 U	47.0000 U	43.0000 U	42.0000 U	48.0000 U	43.0000 U
Aroclor 1248		38.0000 U	47.0000 U	43.0000 U	42.0000 U	48.0000 U	43.0000 U
Aroclor 1254		800.0000	47.0000 U	200.0000	42.0000 U	48.0000 U	43.0000 U
Aroclor 1260		250.0000	47.0000 U	43.0000 U	42.0000 U	48.0000 U	43.0000 U
Total PCB		1050.0000 T	47.0000 UT	200.0000 T	42.0000 UT	48.0000 UT	43.0000 UT
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range							
Gas Range							
Oil Range							
TPH by 418.1					13.0000 U	140.0000	13.0000 U
TPH by Washington HCID 8015							
Inorganics (Total) (mg/kg)							
Aluminum							
Antimony							
Arsenic							
Barium							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08713	SB-08713	SB-08713	SB-08714	SB-08714	SB-08714
	Sample ID:	SB-08713-0020	SB-08713-0060	SB-08713-0100	SB-08714-0020	SB-08714-0070	SB-08714-0100
	Depth (ft bgs):	2 to N/A	6 to N/A	10 to N/A	2 to N/A	7 to N/A	10 to N/A
Beryllium							
Cadmium							
Calcium							
Chromium							
Chromium VI							
Cobalt							
Copper							
Cyanide							
Iron							
Lead							
Magnesium							
Manganese							
Mercury							
Nickel							
Potassium							
Selenium							
Silver							
Sodium							
Thallium							
Vanadium							
Zinc							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08715	SB-08715	SB-08715	SB-08715	SB-10401	SB-10403
	Sample ID:	SB-08715-0020	SB-08715-0070	SB-08715-0095	SB-08715-1020	W15-SB-10401-0100	W20-SB-10403-0015
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	9.5 to N/A	2 to N/A	10.0	1.5 to N/A
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane						150.0000 U	
1,1,2,2-Tetrachloroethane						150.0000 U	
1,1,2-Trichloroethane						150.0000 U	
1,1,2-Trichlorotrifluoroethane						310.0000 U	
1,1-Dichloroethane						150.0000 U	
1,1-Dichloroethene						150.0000 U	
1,2-Dichloroethane						150.0000 U	
1,2-Dichloropropane						150.0000 U	
2-Butanone						2000.0000 UB	
2-Chloroethylvinylether						770.0000 U	
2-Hexanone						770.0000 U	
4-Methyl-2-Pentanone						770.0000 U	
Acetone						770.0000 U	
Benzene						150.0000 U	
Bromodichloromethane						150.0000 U	
Bromoform						150.0000 U	
Bromomethane						310.0000 U	
Carbon Disulfide						150.0000 U	
Carbon Tetrachloride						150.0000 U	
Chlorobenzene						150.0000 U	
Chloroethane						310.0000 U	
Chloroform						150.0000 U	
Chloromethane						310.0000 U	
cis-1,2-Dichloroethene						150.0000 U	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08715	SB-08715	SB-08715	SB-08715	SB-10401	SB-10403
	Sample ID:	SB-08715-0020	SB-08715-0070	SB-08715-0095	SB-08715-1020	W15-SB-10401-0100	W20-SB-10403-0015
Depth (ft bgs):		2 to N/A	7 to N/A	9.5 to N/A	2 to N/A	10.0	1.5 to N/A
cis-1,3-Dichloropropene						150.0000 U	
Dibromochloromethane						150.0000 U	
Ethylbenzene						150.0000 U	
m,p-Xylene							
Methylene Chloride						310.0000 U	
o-Xylene							
Styrene						150.0000 U	
Tetrachloroethene						150.0000 U	
Toluene						150.0000 U	
Total Xylene						310.0000 U	
trans-1,2-Dichloroethene						150.0000 U	
trans-1,3-Dichloropropene						150.0000 U	
Trichloroethene						220.0000	
Trichlorofluoromethane						310.0000 U	
Vinyl Acetate						770.0000 U	
Vinyl Chloride						310.0000 U	
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene						79.0000 U	
1,2-Dichlorobenzene						79.0000 U	
1,3-Dichlorobenzene						79.0000 U	
1,4-Dichlorobenzene						79.0000 U	
2,2'-Oxybis(1-Chloropropane)						79.0000 U	
2,4,5-Trichlorophenol						390.0000 U	
2,4,6-Trichlorophenol						390.0000 U	
2,4-Dichlorophenol						240.0000 U	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08715	SB-08715	SB-08715	SB-08715	SB-10401	SB-10403
	Sample ID:	SB-08715-0020	SB-08715-0070	SB-08715-0095	SB-08715-1020	W15-SB-10401-0100	W20-SB-10403-0015
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	9.5 to N/A	2 to N/A	10.0	1.5 to N/A
2,4-Dimethylphenol						160.0000 U	
2,4-Dinitrophenol						790.0000 U	
2,4-Dinitrotoluene						390.0000 U	
2,6-Dinitrotoluene						390.0000 U	
2-Chloronaphthalene						79.0000 U	
2-Chlorophenol						79.0000 U	
2-Methylnaphthalene						79.0000 U	
2-Methylphenol						79.0000 U	
2-Nitroaniline						390.0000 U	
2-Nitrophenol						390.0000 U	
3,3'-Dichlorobenzidine						390.0000 U	
3-Nitroaniline						390.0000 U	
4,6-Dinitro-2-methylphenol						790.0000 U	
4-Bromophenyl-phenylether						79.0000 U	
4-Chloro-3-methylphenol						160.0000 U	
4-Chloroaniline						240.0000 U	
4-Chlorophenyl-phenylether						79.0000 U	
4-Methylphenol						79.0000 U	
4-Nitroaniline						390.0000 U	
4-Nitrophenol						390.0000 U	
Acenaphthene						79.0000 U	
Acenaphthylene						79.0000 U	
Anthracene						79.0000 U	
Benzo(a)anthracene						79.0000 U	
Benzo(a)pyrene						79.0000 U	
Benzo(b)fluoranthene						79.0000 U	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08715	SB-08715	SB-08715	SB-08715	SB-10401	SB-10403
	Sample ID:	SB-08715-0020	SB-08715-0070	SB-08715-0095	SB-08715-1020	W15-SB-10401-0100	W20-SB-10403-0015
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	9.5 to N/A	2 to N/A	10.0	1.5 to N/A
Benzo(g,h,i)perylene						79.0000 U	
Benzo(k)fluoranthene						79.0000 U	
Benzoic acid						790.0000 U	
Benzyl alcohol						390.0000 U	
bis(2-Chloroethoxy)methane						79.0000 U	
bis(2-Chloroethyl)ether						79.0000 U	
bis(2-Ethylhexyl)phthalate						79.0000 U	
Butylbenzylphthalate						79.0000 U	
Carbazole						79.0000 U	
Chrysene						79.0000 U	
Di-n-butylphthalate						79.0000 U	
Di-n-octylphthalate						79.0000 U	
Dibenz(a,h)anthracene						79.0000 U	
Dibenzofuran						79.0000 U	
Diethylphthalate						79.0000 U	
Dimethylphthalate						79.0000 U	
Fluoranthene						79.0000 U	
Fluorene						79.0000 U	
Hexachlorobenzene						79.0000 U	
Hexachlorobutadiene						160.0000 U	
Hexachlorocyclopentadiene						390.0000 U	
Hexachloroethane						160.0000 U	
Indeno(1,2,3-cd)pyrene						79.0000 U	
Isophorone						79.0000 U	
N-Nitroso-di-n-propylamine						79.0000 U	
N-Nitrosodiphenylamine						79.0000 U	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-08715	SB-08715	SB-08715	SB-08715	SB-10401	SB-10403
	Sample ID:	SB-08715-0020	SB-08715-0070	SB-08715-0095	SB-08715-1020	W15-SB-10401-0100	W20-SB-10403-0015
Constituent	Depth (ft bgs):	2 to N/A	7 to N/A	9.5 to N/A	2 to N/A	10.0	1.5 to N/A
Naphthalene						79.0000 U	
Nitrobenzene						79.0000 U	
Pentachlorophenol						390.0000 U	
Phenanthrene						79.0000 U	
Phenol						160.0000 U	
Pyrene						79.0000 U	
Pesticides/PCBs (ug/kg)							
Aroclor 1016		39.0000 U	50.0000 U	44.0000 U	36.0000 U		
Aroclor 1016/1242						78.0000 U	
Aroclor 1242		39.0000 U	50.0000 U	44.0000 U	36.0000 U		
Aroclor 1248		39.0000 U	50.0000 U	44.0000 U	36.0000 U	78.0000 U	
Aroclor 1254		39.0000 U	50.0000 U	44.0000 U	36.0000 U	78.0000 U	
Aroclor 1260		39.0000 U	50.0000 U	44.0000 U	36.0000 U	78.0000 U	
Total PCB		39.0000 UT	50.0000 UT	44.0000 UT	36.0000 UT	78.0000 UT	
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range							
Gas Range							
Oil Range							
TPH by 418.1		12.0000 U	51.0000	13.0000 U	11.0000 U		
TPH by Washington HCID 8015							
Inorganics (Total) (mg/kg)							
Aluminum							9270.0000
Antimony						6.0000 U	5.0000 UJ
Arsenic						6.0000 U	5.0000 U
Barium						25.0000	24.2000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-08715	SB-08715	SB-08715	SB-08715	SB-10401	SB-10403
	Sample ID:	SB-08715-0020	SB-08715-0070	SB-08715-0095	SB-08715-1020	W15-SB-10401-0100	W20-SB-10403-0015
	Depth (ft bgs):	2 to N/A	7 to N/A	9.5 to N/A	2 to N/A	10.0	1.5 to N/A
Beryllium						0.1000 U	0.1000
Cadmium						0.3000	0.2000 U
Calcium							5190.0000
Chromium						11.8000	10.9000
Chromium VI							
Cobalt							3.5000
Copper						10.2000	8.6000
Cyanide						0.2500 U	
Iron							10500.0000
Lead						5.0000	4.0000
Magnesium							1980.0000
Manganese							96.5000
Mercury						0.0500 U	0.0500 U
Nickel						9.0000	7.0000
Potassium							650.0000
Selenium						6.0000 U	5.0000 U
Silver						0.4000 U	0.3000 U
Sodium							849.0000
Thallium						0.1000 U	5.0000 U
Vanadium							36.3000
Zinc						23.8000	26.8000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-10403	SB-10403	SB-10404	SB-10404	SB-10404
	Sample ID:	W20-SB-10403-0060	W20-SB-10403-0105	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105
	Depth (ft bgs):	6 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Volatile Organic Compounds (ug/kg)						
1,1,1-Trichloroethane						
1,1,2,2-Tetrachloroethane						
1,1,2-Trichloroethane						
1,1,2-Trichlorotrifluoroethane						
1,1-Dichloroethane						
1,1-Dichloroethene						
1,2-Dichloroethane						
1,2-Dichloropropane						
2-Butanone						
2-Chloroethylvinylether						
2-Hexanone						
4-Methyl-2-Pentanone						
Acetone						
Benzene						
Bromodichloromethane						
Bromoform						
Bromomethane						
Carbon Disulfide						
Carbon Tetrachloride						
Chlorobenzene						
Chloroethane						
Chloroform						
Chloromethane						
cis-1,2-Dichloroethene						

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-10403	SB-10403	SB-10404	SB-10404	SB-10404
	Sample ID:	W20-SB-10403-0060	W20-SB-10403-0105	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105
Depth (ft bgs):		6 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
cis-1,3-Dichloropropene						
Dibromochloromethane						
Ethylbenzene						
m,p-Xylene						
Methylene Chloride						
o-Xylene						
Styrene						
Tetrachloroethene						
Toluene						
Total Xylene						
trans-1,2-Dichloroethene						
trans-1,3-Dichloropropene						
Trichloroethene						
Trichlorofluoromethane						
Vinyl Acetate						
Vinyl Chloride						
Semi-Volatile Organic Compounds (ug/kg)						
1,2,4-Trichlorobenzene						
1,2-Dichlorobenzene						
1,3-Dichlorobenzene						
1,4-Dichlorobenzene						
2,2'-Oxybis(1-Chloropropane)						
2,4,5-Trichlorophenol						
2,4,6-Trichlorophenol						
2,4-Dichlorophenol						

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-10403	SB-10403	SB-10404	SB-10404	SB-10404
	Sample ID:	W20-SB-10403-0060	W20-SB-10403-0105	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105
	Depth (ft bgs):	6 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
2,4-Dimethylphenol						
2,4-Dinitrophenol						
2,4-Dinitrotoluene						
2,6-Dinitrotoluene						
2-Chloronaphthalene						
2-Chlorophenol						
2-Methylnaphthalene						
2-Methylphenol						
2-Nitroaniline						
2-Nitrophenol						
3,3'-Dichlorobenzidine						
3-Nitroaniline						
4,6-Dinitro-2-methylphenol						
4-Bromophenyl-phenylether						
4-Chloro-3-methylphenol						
4-Chloroaniline						
4-Chlorophenyl-phenylether						
4-Methylphenol						
4-Nitroaniline						
4-Nitrophenol						
Acenaphthene						
Acenaphthylene						
Anthracene						
Benzo(a)anthracene						
Benzo(a)pyrene						
Benzo(b)fluoranthene						

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-10403	SB-10403	SB-10404	SB-10404	SB-10404
	Sample ID:	W20-SB-10403-0060	W20-SB-10403-0105	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105
Depth (ft bgs):		6 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Benzo(g,h,i)perylene						
Benzo(k)fluoranthene						
Benzoic acid						
Benzyl alcohol						
bis(2-Chloroethoxy)methane						
bis(2-Chloroethyl)ether						
bis(2-Ethylhexyl)phthalate						
Butylbenzylphthalate						
Carbazole						
Chrysene						
Di-n-butylphthalate						
Di-n-octylphthalate						
Dibenz(a,h)anthracene						
Dibenzofuran						
Diethylphthalate						
Dimethylphthalate						
Fluoranthene						
Fluorene						
Hexachlorobenzene						
Hexachlorobutadiene						
Hexachlorocyclopentadiene						
Hexachloroethane						
Indeno(1,2,3-cd)pyrene						
Isophorone						
N-Nitroso-di-n-propylamine						
N-Nitrosodiphenylamine						

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

	Station ID:	SB-10403	SB-10403	SB-10404	SB-10404	SB-10404
	Sample ID:	W20-SB-10403-0060	W20-SB-10403-0105	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105
Constituent	Depth (ft bgs):	6 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Naphthalene						
Nitrobenzene						
Pentachlorophenol						
Phenanthrene						
Phenol						
Pyrene						
Pesticides/PCBs (ug/kg)						
Aroclor 1016						
Aroclor 1016/1242						
Aroclor 1242						
Aroclor 1248						
Aroclor 1254						
Aroclor 1260						
Total PCB						
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range						
Gas Range						
Oil Range						
TPH by 418.1						
TPH by Washington HCID 8015						
Inorganics (Total) (mg/kg)						
Aluminum		11400.0000	10300.0000	9420.0000	11600.0000	9710.0000
Antimony		7.0000 UJ	6.0000 UJ	5.0000 UJ	7.0000 UJ	7.0000 UJ
Arsenic		7.0000 U	6.0000 U	5.0000 U	7.0000 U	7.0000 U
Barium		26.7000	30.5000	21.5000	26.4000	33.4000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 2-87.65

Constituent	Station ID:	SB-10403	SB-10403	SB-10404	SB-10404	SB-10404
	Sample ID:	W20-SB-10403-0060	W20-SB-10403-0105	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105
	Depth (ft bgs):	6 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Beryllium		0.1000	0.1000 U	0.1000	0.2000	0.1000 U
Cadmium		0.3000 U	0.3000 U	0.2000 U	0.3000 U	0.3000 U
Calcium		5530.0000	4520.0000	4660.0000	5560.0000	4380.0000
Chromium		12.7000	13.3000	19.5000	12.9000	10.6000
Chromium VI						
Cobalt		4.1000	4.4000	3.3000	4.2000	4.2000
Copper		11.2000	10.4000	7.5000	10.4000	9.2000
Cyanide						
Iron		11600.0000	13000.0000	10100.0000	11700.0000	13000.0000
Lead		4.0000	4.0000	3.0000	5.0000	3.0000
Magnesium		2240.0000	2070.0000	1890.0000	2240.0000	2050.0000
Manganese		92.8000	122.0000	86.9000	96.6000	121.0000
Mercury		0.0500 U	0.0500 U	0.0500 U	0.0600 U	0.0700 U
Nickel		9.0000	9.0000	7.0000	9.0000	8.0000
Potassium		850.0000	670.0000	610.0000	860.0000	640.0000
Selenium		7.0000 U	6.0000 U	5.0000 U	7.0000 U	7.0000 U
Silver		0.4000 U	0.4000 U	0.3000 U	0.4000 U	0.4000 U
Sodium		1150.0000	979.0000	919.0000	1140.0000	983.0000
Thallium		7.0000 U	6.0000 U	5.0000 U	7.0000 U	7.0000 U
Vanadium		41.3000	46.4000	35.8000	41.0000	39.4000
Zinc		22.8000	24.7000	20.4000	24.0000	22.6000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

	Station ID:	SB-08704	SB-08704	SB-08704	SB-08705	SB-08705	SB-08705
	Sample ID:	W20-SB-08704-0025	W20-SB-08704-0050	W20-SB-08704-0075	W20-SB-08705-0025	W20-SB-08705-0050	W20-SB-08705-0075
Constituent	Depth (ft bgs):	2.5 to N/A	5 to N/A	7.5 to N/A	2.5 to N/A	5 to N/A	7.5 to N/A
Pesticides/PCBs (ug/kg)							
Aroclor 1016							
Aroclor 1016/1242		71.0000 U	86.0000 U	77.0000 U	73.0000 U	96.0000 U	88.0000 U
Aroclor 1242							
Aroclor 1248		71.0000 U	86.0000 U	77.0000 U	73.0000 U	96.0000 U	88.0000 U
Aroclor 1254		71.0000 U	86.0000 U	77.0000 U	73.0000 U	96.0000 U	88.0000 U
Aroclor 1260		71.0000 U	86.0000 U	77.0000 U	73.0000 U	96.0000 U	88.0000 U
Total PCB		71.0000 UT	86.0000 UT	77.0000 UT	73.0000 UT	96.0000 UT	88.0000 UT
Inorganics (Total) (mg/kg)							
Aluminum		8640.0000	17500.0000	9490.0000	8990.0000	14200.0000	19000.0000
Antimony		5.0000 UJ	6.0000 UJ	6.0000 UJ	5.0000 UJ	6.0000 UJ	7.0000 UJ
Arsenic		5.0000 U	6.0000 U	6.0000 U	5.0000 U	6.0000 U	7.0000 U
Barium		19.2000	61.1000	22.5000	22.5000	39.2000	68.1000
Beryllium		0.1000 U	0.2000	0.1000	0.1000	0.3000	0.3000
Cadmium		0.2000 U	0.3000 U	0.2000 U	0.2000 U	0.2000 U	0.3000 U
Chromium		9.5000	34.1000	252.0000	12.1000	115.0000	18.8000
Chromium VI		0.2100 UJH	0.2700 UJH	0.2300 UJH	0.2200 UJH	0.2800 UJH	0.2800 UJH
Cobalt		3.5000	6.5000	3.8000	3.7000	5.6000	6.6000
Copper		6.9000	16.3000	9.3000	8.3000	19.5000	21.6000
Lead		3.0000	3.0000	2.0000 U	2.0000	7.0000	5.0000
Manganese		85.4000	266.0000	97.8000	94.4000	143.0000	238.0000
Mercury		0.0500 U	0.0600 U	0.0500 U	0.0500 U	0.0600	0.0500
Nickel		7.0000	13.0000	8.0000	8.0000	15.0000	15.0000
Selenium		5.0000 U	6.0000 U	6.0000 U	5.0000 U	6.0000 U	7.0000 U
Silver		0.3000 U	0.4000 U	0.3000 U	0.3000 U	0.4000 U	0.4000 U

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

Constituent	Station ID:	SB-08704	SB-08704	SB-08704	SB-08705	SB-08705	SB-08705
	Sample ID:	W20-SB-08704-0025	W20-SB-08704-0050	W20-SB-08704-0075	W20-SB-08705-0025	W20-SB-08705-0050	W20-SB-08705-0075
	Depth (ft bgs):	2.5 to N/A	5 to N/A	7.5 to N/A	2.5 to N/A	5 to N/A	7.5 to N/A
Thallium		5.0000 U	6.0000 U	6.0000 U	5.0000 U	6.0000 U	7.0000 U
Vanadium		33.9000	47.1000	36.5000	36.4000	47.4000	53.4000
Zinc		19.5000	26.0000	25.7000	20.5000	34.0000	33.3000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

Constituent	Station ID:	SB-08706	SB-08706	SB-08706	SB-08709	SB-08709	SB-08709
	Sample ID:	W20-SB-08706-0075	W20-SB-08706-0100	W20-SB-08706-0125	SB-08709-0060	SB-08709-0070	SB-08709-0105
	Depth (ft bgs):	7.5 to N/A	10 to N/A	12.5 to N/A	6 to N/A	7 to N/A	10.5 to N/A
Pesticides/PCBs (ug/kg)							
Aroclor 1016					45.0000 U	56.0000 U	43.0000 U
Aroclor 1016/1242		84.0000 UJH	87.0000 U	87.0000 UJH			
Aroclor 1242					45.0000 U	56.0000 U	43.0000 U
Aroclor 1248		84.0000 UJH	87.0000 U	87.0000 UJH	45.0000 U	56.0000 U	43.0000 U
Aroclor 1254		84.0000 UJH	87.0000 U	87.0000 UJH	45.0000 U	56.0000 U	43.0000 U
Aroclor 1260		84.0000 UJH	87.0000 U	87.0000 UJH	45.0000 U	56.0000 U	43.0000 U
Total PCB		84.0000 UT	87.0000 UT	87.0000 UT	45.0000 UT	56.0000 UT	43.0000 UT
Inorganics (Total) (mg/kg)							
Aluminum		11900.0000	11100.0000	14000.0000			
Antimony		6.0000 UJ	6.0000 UJ	7.0000 UJ			
Arsenic		6.0000 U	6.0000 U	7.0000 U			
Barium		40.9000	36.3000	46.9000			
Beryllium		0.2000	0.2000	0.2000			
Cadmium		0.2000 U	0.3000 U	0.3000 U			
Chromium		14.9000	14.3000	15.8000			
Chromium VI		0.2500 U	0.2600 U	0.2800 U			
Cobalt		5.4000	4.9000	5.4000			
Copper		14.9000	11.5000	15.8000			
Lead		5.0000	4.0000	6.0000			
Manganese		143.0000	161.0000	140.0000			
Mercury		0.0500 U	0.0600 U	0.0700 U			
Nickel		10.0000	9.0000	10.0000			
Selenium		6.0000 U	6.0000 U	7.0000 U			
Silver		0.4000 U	0.4000 U	0.4000 U			

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

Constituent	Station ID:	SB-08706	SB-08706	SB-08706	SB-08709	SB-08709	SB-08709
	Sample ID:	W20-SB-08706-0075	W20-SB-08706-0100	W20-SB-08706-0125	SB-08709-0060	SB-08709-0070	SB-08709-0105
	Depth (ft bgs):	7.5 to N/A	10 to N/A	12.5 to N/A	6 to N/A	7 to N/A	10.5 to N/A
Thallium		6.0000 U	6.0000 U	7.0000 U			
Vanadium		46.4000	46.4000	50.8000			
Zinc		25.5000	23.5000	28.1000			

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

	Station ID:	SB-08712	SB-08712	SB-08712	SB-11001	SB-11001	SB-11001
	Sample ID:	SB-08712-0020	SB-08712-0065	SB-08712-0085	W20-SB-11001-0015	W20-SB-11001-0060	W20-SB-11001-0095
Constituent	Depth (ft bgs):	2 to N/A	6.5 to N/A	8.5 to N/A	1.5 to N/A	6 to N/A	9.5 to N/A
Pesticides/PCBs (ug/kg)							
Aroclor 1016		36.0000 U	47.0000 U	46.0000 U			
Aroclor 1016/1242					70.0000 U	90.0000 U	90.0000 U
Aroclor 1242		36.0000 U	47.0000 U	46.0000 U			
Aroclor 1248		36.0000 U	47.0000 U	46.0000 U	70.0000 U	90.0000 U	90.0000 U
Aroclor 1254		36.0000 U	47.0000 U	46.0000 U	70.0000 U	90.0000 U	90.0000 U
Aroclor 1260		36.0000 U	47.0000 U	46.0000 U	70.0000 U	90.0000 U	90.0000 U
Total PCB		36.0000 UT	47.0000 UT	46.0000 UT	70.0000 UT	90.0000 UT	90.0000 UT
Inorganics (Total) (mg/kg)							
Aluminum							
Antimony							
Arsenic							
Barium							
Beryllium							
Cadmium							
Chromium							
Chromium VI							
Cobalt							
Copper							
Lead							
Manganese							
Mercury							
Nickel							
Selenium							
Silver							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

Constituent	Station ID:	SB-08712	SB-08712	SB-08712	SB-11001	SB-11001	SB-11001
	Sample ID:	SB-08712-0020	SB-08712-0065	SB-08712-0085	W20-SB-11001-0015	W20-SB-11001-0060	W20-SB-11001-0095
	Depth (ft bgs):	2 to N/A	6.5 to N/A	8.5 to N/A	1.5 to N/A	6 to N/A	9.5 to N/A
Thallium							
Vanadium							
Zinc							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

Station ID:		SB-11001
Sample ID:		W20-SB-11001-1095
Constituent	Depth (ft bgs):	9.5 to N/A
Pesticides/PCBs (ug/kg)		
Aroclor 1016		
Aroclor 1016/1242		
Aroclor 1242		
Aroclor 1248		
Aroclor 1254		
Aroclor 1260		
Total PCB		
Inorganics (Total) (mg/kg)		
Aluminum		
Antimony		
Arsenic		
Barium		
Beryllium		
Cadmium		
Chromium		
Chromium VI		
Cobalt		
Copper		
Lead		
Manganese		
Mercury		
Nickel		
Selenium		
Silver		

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for SWMU 77

Station ID:		SB-11001
Sample ID:		W20-SB-11001-1095
Constituent	Depth (ft bgs):	9.5 to N/A
Thallium		
Vanadium		
Zinc		

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	NS-01-104	NS-02-104	SB-10402	SB-10403	SB-10403	SB-10403
	Sample ID:	W15-W1-NS-01	W15-W1-NS-02	W15-SB-10402-0080	W20-SB-10403-0015	W20-SB-10403-0060	W20-SB-10403-0105
Constituent	Depth (ft bgs):	0.66	0.66	8.0	1.5 to N/A	6 to N/A	10.5 to N/A
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane		120.0000 U	1.1000 U	6.7000			
1,1,2,2-Tetrachloroethane		120.0000 U	1.1000 U	1.4000 U			
1,1,2-Trichloroethane		120.0000 U	1.1000 U	3.7000			
1,1,2-Trichlorotrifluoroethane		250.0000 U	2.2000 U	2.8000 U			
1,1-Dichloroethane		120.0000 U	1.1000 U	210.0000			
1,1-Dichloroethene		120.0000 U	1.1000 U	12.0000			
1,2-Dichloroethane		120.0000 U	1.1000 U	8.1000			
1,2-Dichloropropane		120.0000 U	1.1000 U	1.4000 U			
2-Butanone		2300.0000 UB	5.4000 U	12.0000 UB			
2-Chloroethylvinylether		620.0000 U	5.4000 U	7.0000 U			
2-Hexanone		620.0000 U	5.4000 U	7.0000 U			
4-Methyl-2-Pentanone		620.0000 U	5.4000 U	7.0000 U			
Acetone		620.0000 U	7.9000	54.0000			
Benzene		120.0000 U	1.1000 U	1.4000			
Bromodichloromethane		120.0000 U	1.1000 U	1.4000 U			
Bromoform		120.0000 U	1.1000 U	1.4000 U			
Bromomethane		250.0000 U	2.2000 U	2.8000 U			
Carbon Disulfide		120.0000 U	1.1000 U	1.7000			
Carbon Tetrachloride		120.0000 U	1.1000 U	1.4000 U			
Chlorobenzene		120.0000 U	1.1000 U	1.4000 U			
Chloroethane		250.0000 U	2.2000 U	2.8000 U			
Chloroform		120.0000 U	1.1000 U	1.4000 U			
Chloromethane		250.0000 U	2.2000 U	2.8000 U			
cis-1,2-Dichloroethene		120.0000 U	1.1000 U	530.0000 D			

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Constituent	Station ID:	NS-01-104	NS-02-104	SB-10402	SB-10403	SB-10403	SB-10403
	Sample ID:	W15-W1-NS-01	W15-W1-NS-02	W15-SB-10402-0080	W20-SB-10403-0015	W20-SB-10403-0060	W20-SB-10403-0105
Depth (ft bgs):		0.66	0.66	8.0	1.5 to N/A	6 to N/A	10.5 to N/A
cis-1,3-Dichloropropene		120.0000 U	1.1000 U	1.4000 U			
Dibromochloromethane		120.0000 U	1.1000 U	1.4000 U			
Ethylbenzene		120.0000 U	1.1000 U	1.4000 U			
Methylene Chloride		250.0000 U	2.2000 U	2.8000 U			
Styrene		120.0000 U	1.1000 U	1.4000 U			
Tetrachloroethene		120.0000 U	1.1000 U	170.0000			
Toluene		120.0000 U	1.1000 U	10.0000			
Total Xylene		250.0000 U	2.2000 U	2.8000 U			
trans-1,2-Dichloroethene		120.0000 U	1.1000 U	37.0000			
trans-1,3-Dichloropropene		120.0000 U	1.1000 U	1.4000 U			
Trichloroethene		120.0000 U	4.6000	5900.0000 D			
Trichlorofluoromethane		250.0000 U	2.2000 U	2.8000 U			
Vinyl Acetate		620.0000 U	5.4000 U	7.0000 U			
Vinyl Chloride		250.0000 U	2.2000 U	2.8000 U			
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene		69.0000 U	62.0000 U	90.0000 U			
1,2-Dichlorobenzene		69.0000 U	62.0000 U	90.0000 U			
1,3-Dichlorobenzene		69.0000 U	62.0000 U	90.0000 U			
1,4-Dichlorobenzene		69.0000 U	62.0000 U	90.0000 U			
2,2'-Oxybis(1-Chloropropane)		69.0000 U	62.0000 U	90.0000 U			
2,4,5-Trichlorophenol		350.0000 U	310.0000 U	450.0000 U			
2,4,6-Trichlorophenol		350.0000 U	310.0000 U	450.0000 U			
2,4-Dichlorophenol		210.0000 U	190.0000 U	270.0000 U			
2,4-Dimethylphenol		140.0000 U	120.0000 U	180.0000 U			
2,4-Dinitrophenol		690.0000 U	620.0000 U	900.0000 U			

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Station ID:	NS-01-104	NS-02-104	SB-10402	SB-10403	SB-10403	SB-10403	
Sample ID:	W15-W1-NS-01	W15-W1-NS-02	W15-SB-10402-0080	W20-SB-10403-0015	W20-SB-10403-0060	W20-SB-10403-0105	
Constituent	Depth (ft bgs):	0.66	0.66	8.0	1.5 to N/A	6 to N/A	10.5 to N/A
2,4-Dinitrotoluene		350.0000 U	310.0000 U	450.0000 U			
2,6-Dinitrotoluene		350.0000 U	310.0000 U	450.0000 U			
2-Chloronaphthalene		69.0000 U	62.0000 U	90.0000 U			
2-Chlorophenol		69.0000 U	62.0000 U	90.0000 U			
2-Methylnaphthalene		69.0000 U	62.0000 U	90.0000 U			
2-Methylphenol		69.0000 U	62.0000 U	90.0000 U			
2-Nitroaniline		350.0000 U	310.0000 U	450.0000 U			
2-Nitrophenol		350.0000 U	310.0000 U	450.0000 U			
3,3'-Dichlorobenzidine		350.0000 U	310.0000 U	450.0000 U			
3-Nitroaniline		350.0000 U	310.0000 U	450.0000 U			
4,6-Dinitro-2-methylphenol		690.0000 U	620.0000 U	900.0000 U			
4-Bromophenyl-phenylether		69.0000 U	62.0000 U	90.0000 U			
4-Chloro-3-methylphenol		140.0000 U	120.0000 U	180.0000 U			
4-Chloroaniline		210.0000 U	190.0000 U	270.0000 U			
4-Chlorophenyl-phenylether		69.0000 U	62.0000 U	90.0000 U			
4-Methylphenol		69.0000 U	62.0000 U	90.0000 U			
4-Nitroaniline		350.0000 U	310.0000 U	450.0000 U			
4-Nitrophenol		350.0000 U	310.0000 U	450.0000 U			
Acenaphthene		69.0000 U	62.0000 U	90.0000 U			
Acenaphthylene		69.0000 U	62.0000 U	90.0000 U			
Anthracene		69.0000 U	62.0000 U	90.0000 U			
Benzo(a)anthracene		69.0000 U	62.0000 U	90.0000 U			
Benzo(a)pyrene		69.0000 U	62.0000 U	90.0000 U			
Benzo(b)fluoranthene		69.0000 U	62.0000 U	90.0000 U			
Benzo(g,h,i)perylene		69.0000 U	62.0000 U	90.0000 U			
Benzo(k)fluoranthene		69.0000 U	62.0000 U	90.0000 U			

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Station ID:	NS-01-104	NS-02-104	SB-10402	SB-10403	SB-10403	SB-10403	
Sample ID:	W15-W1-NS-01	W15-W1-NS-02	W15-SB-10402-0080	W20-SB-10403-0015	W20-SB-10403-0060	W20-SB-10403-0105	
Constituent	Depth (ft bgs):	0.66	0.66	8.0	1.5 to N/A	6 to N/A	10.5 to N/A
Benzoic acid		690.0000 U	620.0000 U	900.0000 U			
Benzyl alcohol		350.0000 U	310.0000 U	450.0000 U			
bis(2-Chloroethoxy)methane		69.0000 U	62.0000 U	90.0000 U			
bis(2-Chloroethyl)ether		69.0000 U	62.0000 U	90.0000 U			
bis(2-Ethylhexyl)phthalate		650.0000	62.0000 U	90.0000 U			
Butylbenzylphthalate		69.0000 U	62.0000 U	90.0000 U			
Carbazole		69.0000 U	62.0000 U	90.0000 U			
Chrysene		69.0000 U	62.0000 U	90.0000 U			
Di-n-butylphthalate		69.0000 U	62.0000 U	90.0000 U			
Di-n-octylphthalate		69.0000 U	62.0000 U	90.0000 U			
Dibenz(a,h)anthracene		69.0000 U	62.0000 U	90.0000 U			
Dibenzofuran		69.0000 U	62.0000 U	90.0000 U			
Diethylphthalate		69.0000 U	62.0000 U	90.0000 U			
Dimethylphthalate		160.0000	62.0000 U	90.0000 U			
Fluoranthene		69.0000 U	62.0000 U	90.0000 U			
Fluorene		69.0000 U	62.0000 U	90.0000 U			
Hexachlorobenzene		69.0000 U	62.0000 U	90.0000 U			
Hexachlorobutadiene		140.0000 U	120.0000 U	180.0000 U			
Hexachlorocyclopentadiene		350.0000 U	310.0000 U	450.0000 U			
Hexachloroethane		140.0000 U	120.0000 U	180.0000 U			
Indeno(1,2,3-cd)pyrene		69.0000 U	62.0000 U	90.0000 U			
Isophorone		69.0000 U	62.0000 U	90.0000 U			
N-Nitroso-di-n-propylamine		69.0000 U	62.0000 U	90.0000 U			
N-Nitrosodiphenylamine		69.0000 U	62.0000 U	90.0000 U			
Naphthalene		69.0000 U	62.0000 U	90.0000 U			
Nitrobenzene		69.0000 U	62.0000 U	90.0000 U			

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Constituent	Station ID:	NS-01-104	NS-02-104	SB-10402	SB-10403	SB-10403	SB-10403
	Sample ID:	W15-W1-NS-01	W15-W1-NS-02	W15-SB-10402-0080	W20-SB-10403-0015	W20-SB-10403-0060	W20-SB-10403-0105
Depth (ft bgs):		0.66	0.66	8.0	1.5 to N/A	6 to N/A	10.5 to N/A
Pentachlorophenol		350.0000 U	310.0000 U	450.0000 U			
Phenanthrene		69.0000 U	62.0000 U	90.0000 U			
Phenol		140.0000 U	120.0000 U	180.0000 U			
Pyrene		69.0000 U	62.0000 U	90.0000 U			
Pesticides/PCBs (ug/kg)							
Aroclor 1016/1242		300.0000 UI	62.0000 U	90.0000 U			
Aroclor 1248		160.0000 UI	62.0000 U	90.0000 U			
Aroclor 1254		90.0000 UI	62.0000 U	90.0000 U			
Aroclor 1260		69.0000 U	62.0000 U	90.0000 U			
Total PCB		300.0000 UT	62.0000 UT	90.0000 UT			
Inorganics (Total) (mg/kg)							
Aluminum					9270.0000	11400.0000	10300.0000
Antimony		6.0000	5.0000 U	6.0000 U	5.0000 UJ	7.0000 UJ	6.0000 UJ
Arsenic		5.0000 U	5.0000 U	6.0000 U	5.0000 U	7.0000 U	6.0000 U
Barium		22.7000	21.8000	66.1000	24.2000	26.7000	30.5000
Beryllium		0.1000	0.1000	0.4000	0.1000	0.1000	0.1000 U
Cadmium		198.0000	240.0000	0.4000	0.2000 U	0.3000 U	0.3000 U
Calcium					5190.0000	5530.0000	4520.0000
Chromium		14.2000	75.9000	28.2000	10.9000	12.7000	13.3000
Cobalt					3.5000	4.1000	4.4000
Copper		3430.0000	4350.0000	42.5000	8.6000	11.2000	10.4000
Cyanide		0.2000 U	5.5000	0.2200 U			
Iron					10500.0000	11600.0000	13000.0000
Lead		11.0000	4.0000	19.0000	4.0000	4.0000	4.0000
Magnesium					1980.0000	2240.0000	2070.0000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Constituent	Station ID:	NS-01-104	NS-02-104	SB-10402	SB-10403	SB-10403	SB-10403
	Sample ID:	W15-W1-NS-01	W15-W1-NS-02	W15-SB-10402-0080	W20-SB-10403-0015	W20-SB-10403-0060	W20-SB-10403-0105
	Depth (ft bgs):	0.66	0.66	8.0	1.5 to N/A	6 to N/A	10.5 to N/A
Manganese					96.5000	92.8000	122.0000
Mercury		0.0400 U	0.0500 U	0.1100	0.0500 U	0.0500 U	0.0500 U
Nickel		11.0000	8.0000	22.0000	7.0000	9.0000	9.0000
Potassium					650.0000	850.0000	670.0000
Selenium		5.0000 U	5.0000 U	6.0000 U	5.0000 U	7.0000 U	6.0000 U
Silver		0.3000 U	0.3000 U	0.4000	0.3000 U	0.4000 U	0.4000 U
Sodium					849.0000	1150.0000	979.0000
Thallium		0.1000	0.1000 U	0.6000 U	5.0000 U	7.0000 U	6.0000 U
Vanadium					36.3000	41.3000	46.4000
Zinc		49.0000	83.6000	54.5000	26.8000	22.8000	24.7000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10404	SB-10404	SB-10404	SB-10405	SB-10405	SB-10405
	Sample ID:	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105	W20-SB-10405-0015	W20-SB-10405-0065	W20-SB-10405-0105
Constituent	Depth (ft bgs):	1.5 to N/A	6.5 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane							
1,1,2,2-Tetrachloroethane							
1,1,2-Trichloroethane							
1,1,2-Trichlorotrifluoroethane							
1,1-Dichloroethane							
1,1-Dichloroethene							
1,2-Dichloroethane							
1,2-Dichloropropane							
2-Butanone							
2-Chloroethylvinylether							
2-Hexanone							
4-Methyl-2-Pentanone							
Acetone							
Benzene							
Bromodichloromethane							
Bromoform							
Bromomethane							
Carbon Disulfide							
Carbon Tetrachloride							
Chlorobenzene							
Chloroethane							
Chloroform							
Chloromethane							
cis-1,2-Dichloroethene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Constituent	Station ID:	SB-10404	SB-10404	SB-10404	SB-10405	SB-10405	SB-10405
	Sample ID:	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105	W20-SB-10405-0015	W20-SB-10405-0065	W20-SB-10405-0105
Depth (ft bgs):		1.5 to N/A	6.5 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
cis-1,3-Dichloropropene							
Dibromochloromethane							
Ethylbenzene							
Methylene Chloride							
Styrene							
Tetrachloroethene							
Toluene							
Total Xylene							
trans-1,2-Dichloroethene							
trans-1,3-Dichloropropene							
Trichloroethene							
Trichlorofluoromethane							
Vinyl Acetate							
Vinyl Chloride							
Semi-Volatile Organic Compounds (ug/kg)							
1,2,4-Trichlorobenzene							
1,2-Dichlorobenzene							
1,3-Dichlorobenzene							
1,4-Dichlorobenzene							
2,2'-Oxybis(1-Chloropropane)							
2,4,5-Trichlorophenol							
2,4,6-Trichlorophenol							
2,4-Dichlorophenol							
2,4-Dimethylphenol							
2,4-Dinitrophenol							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10404	SB-10404	SB-10404	SB-10405	SB-10405	SB-10405
	Sample ID:	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105	W20-SB-10405-0015	W20-SB-10405-0065	W20-SB-10405-0105
Constituent	Depth (ft bgs):	1.5 to N/A	6.5 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
2,4-Dinitrotoluene							
2,6-Dinitrotoluene							
2-Chloronaphthalene							
2-Chlorophenol							
2-Methylnaphthalene							
2-Methylphenol							
2-Nitroaniline							
2-Nitrophenol							
3,3'-Dichlorobenzidine							
3-Nitroaniline							
4,6-Dinitro-2-methylphenol							
4-Bromophenyl-phenylether							
4-Chloro-3-methylphenol							
4-Chloroaniline							
4-Chlorophenyl-phenylether							
4-Methylphenol							
4-Nitroaniline							
4-Nitrophenol							
Acenaphthene							
Acenaphthylene							
Anthracene							
Benzo(a)anthracene							
Benzo(a)pyrene							
Benzo(b)fluoranthene							
Benzo(g,h,i)perylene							
Benzo(k)fluoranthene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Constituent	Station ID:	SB-10404	SB-10404	SB-10404	SB-10405	SB-10405	SB-10405
	Sample ID:	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105	W20-SB-10405-0015	W20-SB-10405-0065	W20-SB-10405-0105
Depth (ft bgs):		1.5 to N/A	6.5 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Benzoic acid							
Benzyl alcohol							
bis(2-Chloroethoxy)methane							
bis(2-Chloroethyl)ether							
bis(2-Ethylhexyl)phthalate							
Butylbenzylphthalate							
Carbazole							
Chrysene							
Di-n-butylphthalate							
Di-n-octylphthalate							
Dibenz(a,h)anthracene							
Dibenzofuran							
Diethylphthalate							
Dimethylphthalate							
Fluoranthene							
Fluorene							
Hexachlorobenzene							
Hexachlorobutadiene							
Hexachlorocyclopentadiene							
Hexachloroethane							
Indeno(1,2,3-cd)pyrene							
Isophorone							
N-Nitroso-di-n-propylamine							
N-Nitrosodiphenylamine							
Naphthalene							
Nitrobenzene							

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10404	SB-10404	SB-10404	SB-10405	SB-10405	SB-10405
	Sample ID:	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105	W20-SB-10405-0015	W20-SB-10405-0065	W20-SB-10405-0105
Constituent	Depth (ft bgs):	1.5 to N/A	6.5 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Pentachlorophenol							
Phenanthrene							
Phenol							
Pyrene							
Pesticides/PCBs (ug/kg)							
Aroclor 1016/1242							
Aroclor 1248							
Aroclor 1254							
Aroclor 1260							
Total PCB							
Inorganics (Total) (mg/kg)							
Aluminum		9420.0000	11600.0000	9710.0000	9990.0000	17300.0000	20600.0000
Antimony		5.0000 UJ	7.0000 UJ	7.0000 UJ	5.0000 UJ	7.0000 UJ	7.0000 UJ
Arsenic		5.0000 U	7.0000 U	7.0000 U	5.0000 U	7.0000	7.0000 U
Barium		21.5000	26.4000	33.4000	23.6000	46.3000	81.9000
Beryllium		0.1000	0.2000	0.1000 U	0.1000	0.3000	0.4000
Cadmium		0.2000 U	0.3000 U	0.3000 U	0.2000 U	0.3000 U	0.3000 U
Calcium		4660.0000	5560.0000	4380.0000	5220.0000	6990.0000	5580.0000
Chromium		19.5000	12.9000	10.6000	12.1000	20.5000	19.2000
Cobalt		3.3000	4.2000	4.2000	3.6000	7.0000	8.7000
Copper		7.5000	10.4000	9.2000	9.0000	26.3000	25.4000
Cyanide							
Iron		10100.0000	11700.0000	13000.0000	11100.0000	20800.0000	20700.0000
Lead		3.0000	5.0000	3.0000	3.0000	14.0000	6.0000
Magnesium		1890.0000	2240.0000	2050.0000	2040.0000	4030.0000	4090.0000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Constituent	Station ID:	SB-10404	SB-10404	SB-10404	SB-10405	SB-10405	SB-10405
	Sample ID:	W20-SB-10404-0015	W20-SB-10404-0065	W20-SB-10404-0105	W20-SB-10405-0015	W20-SB-10405-0065	W20-SB-10405-0105
	Depth (ft bgs):	1.5 to N/A	6.5 to N/A	10.5 to N/A	1.5 to N/A	6.5 to N/A	10.5 to N/A
Manganese		86.9000	96.6000	121.0000	94.8000	169.0000	417.0000
Mercury		0.0500 U	0.0600 U	0.0700 U	0.0500 U	0.0900	0.0600 U
Nickel		7.0000	9.0000	8.0000	8.0000	16.0000	15.0000
Potassium		610.0000	860.0000	640.0000	730.0000	1490.0000	1300.0000
Selenium		5.0000 U	7.0000 U	7.0000 U	5.0000 U	7.0000 U	7.0000 U
Silver		0.3000 U	0.4000 U	0.4000 U	0.3000 U	0.4000 U	0.4000 U
Sodium		919.0000	1140.0000	983.0000	984.0000	1260.0000	1350.0000
Thallium		5.0000 U	7.0000 U	7.0000 U	5.0000 U	7.0000 U	7.0000 U
Vanadium		35.8000	41.0000	39.4000	41.1000	53.6000	58.4000
Zinc		20.4000	24.0000	22.6000	24.9000	44.4000	39.3000

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10405
	Sample ID:	W20-SB-10405-1015
Constituent	Depth (ft bgs):	1.5 to N/A
Volatile Organic Compounds (ug/kg)		
1,1,1-Trichloroethane		
1,1,2,2-Tetrachloroethane		
1,1,2-Trichloroethane		
1,1,2-Trichlorotrifluoroethane		
1,1-Dichloroethane		
1,1-Dichloroethene		
1,2-Dichloroethane		
1,2-Dichloropropane		
2-Butanone		
2-Chloroethylvinylether		
2-Hexanone		
4-Methyl-2-Pentanone		
Acetone		
Benzene		
Bromodichloromethane		
Bromoform		
Bromomethane		
Carbon Disulfide		
Carbon Tetrachloride		
Chlorobenzene		
Chloroethane		
Chloroform		
Chloromethane		
cis-1,2-Dichloroethene		

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10405
	Sample ID:	W20-SB-10405-1015
Constituent	Depth (ft bgs):	1.5 to N/A
cis-1,3-Dichloropropene		
Dibromochloromethane		
Ethylbenzene		
Methylene Chloride		
Styrene		
Tetrachloroethene		
Toluene		
Total Xylene		
trans-1,2-Dichloroethene		
trans-1,3-Dichloropropene		
Trichloroethene		
Trichlorofluoromethane		
Vinyl Acetate		
Vinyl Chloride		
Semi-Volatile Organic Compounds (ug/kg)		
1,2,4-Trichlorobenzene		
1,2-Dichlorobenzene		
1,3-Dichlorobenzene		
1,4-Dichlorobenzene		
2,2'-Oxybis(1-Chloropropane)		
2,4,5-Trichlorophenol		
2,4,6-Trichlorophenol		
2,4-Dichlorophenol		
2,4-Dimethylphenol		
2,4-Dinitrophenol		

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10405
	Sample ID:	W20-SB-10405-1015
Constituent	Depth (ft bgs):	1.5 to N/A
2,4-Dinitrotoluene		
2,6-Dinitrotoluene		
2-Chloronaphthalene		
2-Chlorophenol		
2-Methylnaphthalene		
2-Methylphenol		
2-Nitroaniline		
2-Nitrophenol		
3,3'-Dichlorobenzidine		
3-Nitroaniline		
4,6-Dinitro-2-methylphenol		
4-Bromophenyl-phenylether		
4-Chloro-3-methylphenol		
4-Chloroaniline		
4-Chlorophenyl-phenylether		
4-Methylphenol		
4-Nitroaniline		
4-Nitrophenol		
Acenaphthene		
Acenaphthylene		
Anthracene		
Benzo(a)anthracene		
Benzo(a)pyrene		
Benzo(b)fluoranthene		
Benzo(g,h,i)perylene		
Benzo(k)fluoranthene		

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

	Station ID:	SB-10405
	Sample ID:	W20-SB-10405-1015
Constituent	Depth (ft bgs):	1.5 to N/A
Benzoic acid		
Benzyl alcohol		
bis(2-Chloroethoxy)methane		
bis(2-Chloroethyl)ether		
bis(2-Ethylhexyl)phthalate		
Butylbenzylphthalate		
Carbazole		
Chrysene		
Di-n-butylphthalate		
Di-n-octylphthalate		
Dibenz(a,h)anthracene		
Dibenzofuran		
Diethylphthalate		
Dimethylphthalate		
Fluoranthene		
Fluorene		
Hexachlorobenzene		
Hexachlorobutadiene		
Hexachlorocyclopentadiene		
Hexachloroethane		
Indeno(1,2,3-cd)pyrene		
Isophorone		
N-Nitroso-di-n-propylamine		
N-Nitrosodiphenylamine		
Naphthalene		
Nitrobenzene		

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

		Station ID:	SB-10405
		Sample ID:	W20-SB-10405-1015
Constituent	Depth (ft bgs):	1.5 to N/A	
Pentachlorophenol			
Phenanthrene			
Phenol			
Pyrene			
Pesticides/PCBs (ug/kg)			
Aroclor 1016/1242			
Aroclor 1248			
Aroclor 1254			
Aroclor 1260			
Total PCB			
Inorganics (Total) (mg/kg)			
Aluminum		9870.0000	
Antimony		5.0000 UJ	
Arsenic		5.0000 U	
Barium		24.1000	
Beryllium		0.2000	
Cadmium		0.2000 U	
Calcium		5430.0000	
Chromium		12.7000	
Cobalt		3.5000	
Copper		11.6000	
Cyanide			
Iron		10900.0000	
Lead		3.0000	
Magnesium		2010.0000	

Shaded columns indicate soil at this location was removed during the Interim Measure.

Soil Report for OA 16

Station ID:		SB-10405
Sample ID:		W20-SB-10405-1015
Constituent	Depth (ft bgs):	1.5 to N/A
Manganese		92.9000
Mercury		0.0500 U
Nickel		9.0000
Potassium		710.0000
Selenium		5.0000 U
Silver		0.3000 U
Sodium		994.0000
Thallium		5.0000 U
Vanadium		40.6000
Zinc		24.0000

Shaded columns indicate soil at this location was removed during the Interim Measure.

APPENDIX C

CONFIRMATORY SAMPLE RESULTS

SWMU 2-87.65

SOIL ANALYTICAL DATA



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08738-0100

Lab Sample ID: AI62A
LIMS ID: 99-7699
Matrix: Soil

QC Report No: AI62-Boeing
Project: Boeing P2
2-87.65
Date Sampled: 05/28/99
Date Received: 05/28/99

Data Release Authorized: CH
Reported: 06/04/99 6/4/99

Date extracted: 06/02/99
Date analyzed: 06/03/99

Sample Amount: 10.5 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.1

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 11.8%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	38 U
53469-21-9	Aroclor 1242	38 U
12672-29-6	Aroclor 1248	38 U
11097-69-1	Aroclor 1254	290
11096-82-5	Aroclor 1260	45
11104-28-2	Aroclor 1221	76 U
11141-16-5	Aroclor 1232	38 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	96.7%
Tetrachlorometaxylene	98.4%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08741-0030

Lab Sample ID: AI62D
LIMS ID: 99-7702
Matrix: Soil

QC Report No: AI62-Boeing
Project: Boeing P2
2-87.65
Date Sampled: 05/28/99
Date Received: 05/28/99

Data Release Authorized: (11
Reported: 06/04/99 4/4/99

Date extracted: 06/02/99
Date analyzed: 06/03/99

Sample Amount: 11.3 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.2

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 6.1 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	35 U
53469-21-9	Aroclor 1242	35 U
12672-29-6	Aroclor 1248	35 U
11097-69-1	Aroclor 1254	35 U
11096-82-5	Aroclor 1260	35 U
11104-28-2	Aroclor 1221	71 U
11141-16-5	Aroclor 1232	35 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	101%
Tetrachlorometaxylene	107%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08742-0050

Lab Sample ID: AI62E
LIMS ID: 99-7703
Matrix: Soil

QC Report No: AI62-Boeing
Project: Boeing P2
2-87.65
Date Sampled: 05/28/99
Date Received: 05/28/99

Data Release Authorized: C/t
Reported: 06/04/99 4/4/99

Date extracted: 06/02/99
Date analyzed: 06/03/99

Sample Amount: 10.6 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.4

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 11.6%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	38 U
53469-21-9	Aroclor 1242	38 U
12672-29-6	Aroclor 1248	38 U
11097-69-1	Aroclor 1254	170
11096-82-5	Aroclor 1260	44 Y
11104-28-2	Aroclor 1221	75 U
11141-16-5	Aroclor 1232	38 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	95.4%
Tetrachlorometaxylene	96.1%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS
WA TPHd Range C12 to C24 by GC/FID
and Motor Oil

LIMS ID: 99-7699

Matrix: Soil

QC Report No: AI62-Boeing

Project: Boeing P2

2-87.65

Data Release Authorized:

Date Received: 05/28/99

Reported: 06/07/99

Candyn S Roberts
6/7/99

Lab ID	Sample ID	Date Analyzed	Dilution Factor	Diesel Range	*HC ID	Motor Oil Range	Surrogate Recovery
AI62MB	Method Blank	06/05/99	1:1	5.0 U	---	10 U	79.0%
AI62A	SB-08738-0100	06/05/99	1:1	18	DIES/MO	14	65.0%
AI62B	SB-08739-0030	06/05/99	1:1	11	M.OIL+	15	70.0%
AI62C	SB-08740-0030	06/05/99	1:1	23	M.OIL+	72	62.0%
AI62D	SB-08741-0030	06/05/99	1:1	5.3 U	---	11 U	70.0%
AI62E	SB-08742-0050	06/05/99	1:1	5.6 U	M.OIL	13	66.0%

Values reported in ppm (mg/kg) on a dry weight basis.

Surrogate is Methyl-Arachidate.

- * ID indicates, in the opinion of the analyst, the petroleum product with the best pattern match. 'NO' indicates that there was not a good match for any of the requested products. Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38.

Data Qualifiers

- U Compound not detected at the given detection limit.
J Indicates an estimated value below the calculated detection limit.
S No value reported due to saturation of the detector. Dilution required.
D Indicates the surrogate was not detected because of dilution of the extract.
E Indicates a value above the linear range of the detector. Dilution required.
NR Indicates no recovery due to matrix interference.
B Indicates compound also detected in the method blank.

FORM-1 WA TPHD



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08752-0030

Lab Sample ID: AK89A
LIMS ID: 99-8993
Matrix: Soil

QC Report No: AK89-Boeing
Project:

2-87 IM

Date Sampled: 06/21/99

Date Received: 06/21/99

Data Release Authorized:
Reported: 06/23/99

Cathleen New

Date extracted: 06/22/99
Date analyzed: 06/22/99

Sample Amount: 11.4 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 8.2

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 5.3 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	35 U
53469-21-9	Aroclor 1242	35 U
12672-29-6	Aroclor 1248	35 U
11097-69-1	Aroclor 1254	16 J
11096-82-5	Aroclor 1260	35 U
11104-28-2	Aroclor 1221	70 U
11141-16-5	Aroclor 1232	35 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl 70.2%
Tetrachlorometaxylene 85.2%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08753-0030

Lab Sample ID: AK89B

LIMS ID: 99-8994

Matrix: Soil

QC Report No: AK89-Boeing

Project:

2-87 IM

Date Sampled: 06/21/99

Date Received: 06/21/99

Data Release Authorized:

Reported: 06/23/99

Catherine

Date extracted: 06/22/99

Date analyzed: 06/22/99

Sample Amount: 11.3 g-dry-wt

Final Ext Vol: 4.0 mL

pH: 8.2

GPC Cleanup: No

Florisil Cleanup: No

Acid Cleanup: Yes

Sulfur Cleanup: Yes

Conc/Dilution Factor: 1:1

Percent Moisture: 6.0 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	35 U
53469-21-9	Aroclor 1242	35 U
12672-29-6	Aroclor 1248	35 U
11097-69-1	Aroclor 1254	35 U
11096-82-5	Aroclor 1260	35 U
11104-28-2	Aroclor 1221	70 U
11141-16-5	Aroclor 1232	35 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	47.6%
Tetrachlorometaxylene	60.1%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

Summary of Confirmatory Sample Results for SWMU 2-87.65

	Station ID:	SB-08738	SB-08739	SB-08740	SB-08741	SB-08742	SB-08752
	Sample ID:	SB-08738-0100	SB-08739-0030	SB-08740-0030	SB-08741-0030	SB-08742-0050	SB-08752-0030
Constituent	Depth (ft bgs):	10 to N/A	3 to N/A	3 to N/A	3 to N/A	5 to N/A	3.0 to 5.0
Pesticides/PCBs (ug/kg)							
Aroclor 1016		38.0000 U	38.0000 U	870.0000 U	35.0000 U	38.0000 U	35.0000 U
Aroclor 1221		76.0000 U	76.0000 U	1800.0000 U	71.0000 U	75.0000 U	70.0000 U
Aroclor 1232		38.0000 U	38.0000 U	870.0000 U	35.0000 U	38.0000 U	35.0000 U
Aroclor 1242		38.0000 U	38.0000 U	870.0000 U	35.0000 U	38.0000 U	35.0000 U
Aroclor 1248		38.0000 U	38.0000 U	870.0000 U	35.0000 U	38.0000 U	35.0000 U
Aroclor 1254		290.0000	5400.0000	23000.0000	35.0000 U	170.0000	16.0000 J
Aroclor 1260		45.0000	520.0000	3600.0000 Y	35.0000 U	44.0000 Y	35.0000 U
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range		18.0000	11.0000	23.0000	5.3000 U	5.6000 U	
Oil Range		14.0000	15.0000	72.0000	11.0000 U	13.0000	

Indicates sample exceeded cleanup goal and additional soil was removed at this location.

Summary of Confirmatory Sample Results for SWMU 2-87.65

Station ID:		SB-08753
Sample ID:		SB-08753-0030
Constituent	Depth (ft bgs):	3.0 to 5.0
Pesticides/PCBs (ug/kg)		
Aroclor 1016		35.0000 U
Aroclor 1221		70.0000 U
Aroclor 1232		35.0000 U
Aroclor 1242		35.0000 U
Aroclor 1248		35.0000 U
Aroclor 1254		35.0000 U
Aroclor 1260		35.0000 U
Total Petroleum Hydrocarbons (mg/kg)		
Diesel Range		
Oil Range		

Indicates sample exceeded cleanup goal and additional soil was removed at this location.

SWMU 78.B

SOIL ANALYTICAL DATA



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08728-0030

Lab Sample ID: AH16A
LIMS ID: 99-6727
Matrix: Soil

QC Report No: AH16-Boeing
Project:

2-87 1M

Date Sampled: 05/18/99

Date Received: 05/18/99

Data Release Authorized: CH
Reported: 06/01/99 6/1/99

Date extracted: 05/21/99

Date analyzed: 05/25/99

Sample Amount: 11.0 g-dry-wt

Final Ext Vol: 4.0 mL

pH: 9.4

GPC Cleanup: No

Florisil Cleanup: No

Acid Cleanup: Yes

Sulfur Cleanup: Yes

Conc/Dilution Factor: 1:2

Percent Moisture: 8.7 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	72 U
53469-21-9	Aroclor 1242	72 U
12672-29-6	Aroclor 1248	72 U
11097-69-1	Aroclor 1254	690
11096-82-5	Aroclor 1260	170 Y
11104-28-2	Aroclor 1221	140 U
11141-16-5	Aroclor 1232	72 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	78.3%
Tetrachlorometaxylene	79.0%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08729-0030

Lab Sample ID: AH16B
LIMS ID: 99-6728
Matrix: Soil

QC Report No: AH16-Boeing
Project: 2-87 1M
Date Sampled: 05/18/99
Date Received: 05/18/99

Data Release Authorized: *CH*
Reported: 06/01/99 *6/1/99*

Date extracted: 05/21/99
Date analyzed: 05/25/99

Sample Amount: 11.1 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 8.9

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 7.5 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	36 U
53469-21-9	Aroclor 1242	36 U
12672-29-6	Aroclor 1248	36 U
11097-69-1	Aroclor 1254	270
11096-82-5	Aroclor 1260	44 Y
11104-28-2	Aroclor 1221	72 U
11141-16-5	Aroclor 1232	36 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	72.0%
Tetrachlorometaxylene	73.8%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration,
but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08730-0030

Lab Sample ID: AH16C
LIMS ID: 99-6729
Matrix: Soil

QC Report No: AH16-Boeing
Project:

2-87 1M
Date Sampled: 05/18/99
Date Received: 05/18/99

Data Release Authorized: *cl*
Reported: 06/01/99 *6/1/99*

Date extracted: 05/21/99
Date analyzed: 05/25/99

Sample Amount: 9.66 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 9.2

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:2
Percent Moisture: 19.6%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	83 U
53469-21-9	Aroclor 1242	83 U
12672-29-6	Aroclor 1248	83 U
11097-69-1	Aroclor 1254	840
11096-82-5	Aroclor 1260	150 Y
11104-28-2	Aroclor 1221	170 U
11141-16-5	Aroclor 1232	83 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl 94.7%
Tetrachlorometaxylene 75.5%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08731-0030

Lab Sample ID: AH16D
LIMS ID: 99-6730
Matrix: Soil

QC Report No: AH16-Boeing
Project: 2-87 1M
Date Sampled: 05/18/99
Date Received: 05/18/99

Data Release Authorized: C/H
Reported: 06/01/99 4/1/99

Date extracted: 05/21/99
Date analyzed: 05/25/99

Sample Amount: 11.3 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 9.0

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 6.2 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	35 U
53469-21-9	Aroclor 1242	35 U
12672-29-6	Aroclor 1248	35 U
11097-69-1	Aroclor 1254	140
11096-82-5	Aroclor 1260	110
11104-28-2	Aroclor 1221	71 U
11141-16-5	Aroclor 1232	35 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl 82.9%
Tetrachlorometaxylene 77.8%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08732-0030

Lab Sample ID: AH16E

LIMS ID: 99-6731

Matrix: Soil

QC Report No: AH16-Boeing

Project:

2-87 1M

Date Sampled: 05/18/99

Date Received: 05/18/99

Data Release Authorized: CH

Reported: 06/01/99

6/1/99

Date extracted: 05/21/99

Date analyzed: 05/25/99

Sample Amount: 10.2 g-dry-wt

Final Ext Vol: 4.0 mL

pH: 11.

GPC Cleanup: No

Florisil Cleanup: No

Acid Cleanup: Yes

Sulfur Cleanup: Yes

Conc/Dilution Factor: 1:2

Percent Moisture: 14.6%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	78 U
53469-21-9	Aroclor 1242	78 U
12672-29-6	Aroclor 1248	78 U
11097-69-1	Aroclor 1254	690
11096-82-5	Aroclor 1260	150 Y
11104-28-2	Aroclor 1221	160 U
11141-16-5	Aroclor 1232	78 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	83.4%
Tetrachlorometaxylene	77.2%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS
WA TPHd Range C12 to C24 by GC/FID
and Motor Oil

LIMS ID: 99-6727
Matrix: Soil

QC Report No: AH16-Boeing
Project: 2-87 1M

Data Release Authorized: *J.W.* Date Received: 05/18/99
Reported: 06/05/99 *6/5/99*

Lab ID	Sample ID	Date Analyzed	Dilution Factor	Diesel Range	*HC ID	Motor Oil Range	Surrogate Recovery
AH16MB	Method Blank	05/22/99	1:1	5.0 U	---	10 U	92.0%
AH16A	SB-08728-0030	06/01/99	1:1	5.4 U	---	11 U	54.0%
AH16MB	Method Blank	05/29/99	1:1	5.0 U	---	10 U	75.0%
AH16B	SB-08729-0030	05/22/99	1:1	5.4 U	---	11 U	64.0%
AH16BD	SB-08729-0030-DUPL	05/22/99	1:1	5.4 U	---	11 U	61.0%
AH16C	SB-08730-0030	05/22/99	1:1	15	M. OIL	44	60.0%
AH16D	SB-08731-0030	05/22/99	1:1	19	M. OIL	100	59.0%
AH16E	SB-08732-0030	05/22/99	1:1	47	NO	83	64.0%

Values reported in ppm (mg/kg) on a dry weight basis.

Surrogate is Methyl-Arachidate.

- * ID indicates, in the opinion of the analyst, the petroleum product with the best pattern match. 'NO' indicates that there was not a good match for any of the requested products. Diesel quantitation on total peaks in the range from C12 to C24. Motor Oil quantitation on total peaks in the range from C24 to C38.

Data Qualifiers

- U Compound not detected at the given detection limit.
- J Indicates an estimated value below the calculated detection limit.
- S No value reported due to saturation of the detector. Dilution required.
- D Indicates the surrogate was not detected because of dilution of the extract.
- E Indicates a value above the linear range of the detector. Dilution required.
- NR Indicates no recovery due to matrix interference.
- B Indicates compound also detected in the method blank.

FORM-1 WA TPHD

Summary of Confirmatory Sample Results for SWMU 78.B

Constituent	Station ID:	SB-08728	SB-08729	SB-08730	SB-08731	SB-08732
	Sample ID:	SB-08728-0030	SB-08729-0030	SB-08730-0030	SB-08731-0030	SB-08732-0030
Depth (ft bgs):		3 to N/A	3 to N/A	3 to N/A	3 to N/A	3 to N/A
Pesticides/PCBs (ug/kg)						
Aroclor 1016		72.0000 U	36.0000 U	83.0000 U	35.0000 U	78.0000 U
Aroclor 1221		140.0000 U	72.0000 U	170.0000 U	71.0000 U	160.0000 U
Aroclor 1232		72.0000 U	36.0000 U	83.0000 U	35.0000 U	78.0000 U
Aroclor 1242		72.0000 U	36.0000 U	83.0000 U	35.0000 U	78.0000 U
Aroclor 1248		72.0000 U	36.0000 U	83.0000 U	35.0000 U	78.0000 U
Aroclor 1254		690.0000	270.0000	840.0000	140.0000	690.0000
Aroclor 1260		170.0000 Y	44.0000 Y	150.0000 Y	110.0000	150.0000 Y
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range		5.4000 U	5.4000 U	15.0000	19.0000	47.0000
Oil Range		11.0000 U	11.0000 U	44.0000	100.0000	83.0000

SWMU 77

SOIL ANALYTICAL DATA



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08733-0025

Lab Sample ID: AI16K
LIMS ID: 99-7356
Matrix: Soil

QC Report No: AI16-Boeing
Project:

2-87 IM

Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized: C/H
Reported: 06/02/99 4/2/99

Date extracted: 05/27/99
Date analyzed: 05/28/99

Sample Amount: 11.0 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.4

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 8.7 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	36 U
53469-21-9	Aroclor 1242	36 U
12672-29-6	Aroclor 1248	36 U
11097-69-1	Aroclor 1254	36 U
11096-82-5	Aroclor 1260	36 U
11104-28-2	Aroclor 1221	73 U
11141-16-5	Aroclor 1232	36 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	92.2%
Tetrachlorometaxylene	93.6%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08734-0050

Lab Sample ID: AI16L
LIMS ID: 99-7357
Matrix: Soil

QC Report No: AI16-Boeing
Project:

2-87 IM

Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized: CH
Reported: 06/02/99 4/1/99

Date extracted: 05/27/99
Date analyzed: 05/28/99

Sample Amount: 8.81 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.3

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 26.6%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	45 U
53469-21-9	Aroclor 1242	45 U
12672-29-6	Aroclor 1248	45 U
11097-69-1	Aroclor 1254	45 U
11096-82-5	Aroclor 1260	45 U
11104-28-2	Aroclor 1221	91 U
11141-16-5	Aroclor 1232	45 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	91.4%
Tetrachlorometaxylene	90.1%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08735-0025

Lab Sample ID: AI16M
LIMS ID: 99-7358
Matrix: Soil

QC Report No: AI16-Boeing
Project:
2-87 IM
Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized: CH
Reported: 06/02/99

4/2/99

Date extracted: 05/27/99
Date analyzed: 05/28/99

Sample Amount: 11.2 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.2

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 6.3 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	36 U
53469-21-9	Aroclor 1242	36 U
12672-29-6	Aroclor 1248	36 U
11097-69-1	Aroclor 1254	36 U
11096-82-5	Aroclor 1260	36 U
11104-28-2	Aroclor 1221	71 U
11141-16-5	Aroclor 1232	36 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl 94.5%
Tetrachlorometaxylene 94.4%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08736-0025

Lab Sample ID: AI16N
LIMS ID: 99-7359
Matrix: Soil

QC Report No: AI16-Boeing
Project: 2-87 IM
Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized: C/H
Reported: 06/02/99 4/2/99

Date extracted: 05/27/99
Date analyzed: 05/28/99

Sample Amount: 11.2 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.2

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 6.8 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	36 U
53469-21-9	Aroclor 1242	36 U
12672-29-6	Aroclor 1248	36 U
11097-69-1	Aroclor 1254	36 U
11096-82-5	Aroclor 1260	36 U
11104-28-2	Aroclor 1221	71 U
11141-16-5	Aroclor 1232	36 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl 91.4%
Tetrachlorometaxylene 95.7%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
E Indicates a value above the linear range of the detector.
Dilution Required
S Indicates no value reported due to saturation of the detector.
D Indicates the surrogate was diluted out.
U Indicates compound was analyzed for, but not detected at the given detection limit.
B Found in associated method blank
NA Indicates compound was not analyzed.
NR Indicates no recovery due to interferences.
NV Indicates no value reportable - see additional analyses.
Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08737-0050

Lab Sample ID: AI160
LIMS ID: 99-7360
Matrix: Soil

QC Report No: AI16-Boeing
Project:
2-87 IM
Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized: C/H
Reported: 06/02/99 6/2/99

Date extracted: 05/27/99
Date analyzed: 05/28/99

Sample Amount: 8.87 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 7.1

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 26.1%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	45 U
53469-21-9	Aroclor 1242	45 U
12672-29-6	Aroclor 1248	45 U
11097-69-1	Aroclor 1254	45 U
11096-82-5	Aroclor 1260	45 U
11104-28-2	Aroclor 1221	90 U
11141-16-5	Aroclor 1232	45 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	89.3%
Tetrachlorometaxylene	89.9%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: SB-08749-0040

Lab Sample ID: AJ49A
LIMS ID: 99-8157
Matrix: Soil

QC Report No: AJ49-Boeing
Project:

2-87 IM

Date Sampled: 06/07/99

Date Received: 06/07/99

Data Release Authorized:
Reported: 07/01/99

Catherine H. H. H.

Date extracted: 06/09/99

Date analyzed: 06/09/99

Sample Amount: 11.4 g-dry-wt

Final Ext Vol: 4.0 mL

pH: 8.1

GPC Cleanup: No

Florisil Cleanup: No

Acid Cleanup: Yes

Sulfur Cleanup: Yes

Conc/Dilution Factor: 1:1

Percent Moisture: 4.7 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	35 U
53469-21-9	Aroclor 1242	35 U
12672-29-6	Aroclor 1248	35 U
11097-69-1	Aroclor 1254	35 U
11096-82-5	Aroclor 1260	17 J
11104-28-2	Aroclor 1221	70 U
11141-16-5	Aroclor 1232	35 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl	102%
Tetrachlorometaxylene	113%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
- Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences. The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD



ANALYTICAL
RESOURCES
INCORPORATED

Sample No: SB-08750-0030

Lab Sample ID: AJ49B
LIMS ID: 99-8158
Matrix: Soil

QC Report No: AJ49-Boeing
Project:

2-87 IM

Date Sampled: 06/07/99

Date Received: 06/07/99

Data Release Authorized:
Reported: 07/01/99

Cathryn New

Date extracted: 06/09/99
Date analyzed: 06/09/99

Sample Amount: 11.1 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 8.2

GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 7.7 %

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	36 U
53469-21-9	Aroclor 1242	36 U
12672-29-6	Aroclor 1248	36 U
11097-69-1	Aroclor 1254	36 U
11096-82-5	Aroclor 1260	36 U
11104-28-2	Aroclor 1221	72 U
11141-16-5	Aroclor 1232	36 U

PCB-Aroclor Surrogate Recovery

Decachlorobiphenyl 99.4%
Tetrachlorometaxylene 107%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration,
but in the opinion of the analyst, confirmation was inadequate.

FORM-1 PCB

ORGANICS ANALYSIS DATA SHEET
PCB by GC/ECD

Sample No: 88-08751-0050

Lab Sample ID: AJ49C
LIMS ID: 99-8159
Matrix: SoilQC Report No: AJ49-Boeing
Project:

2-87 IM

Date Sampled: 06/07/99

Date Received: 06/07/99

Data Release Authorized:
Reported: 07/01/99Date extracted: 06/09/99
Date analyzed: 06/09/99Sample Amount: 10.7 g-dry-wt
Final Ext Vol: 4.0 mL
pH: 8.4GPC Cleanup: No
Florisil Cleanup: No
Acid Cleanup: Yes
Sulfur Cleanup: Yes
Conc/Dilution Factor: 1:1
Percent Moisture: 10.5%

Reported in Total ug/kg Dry Weight

CAS Number	Analyte	Value
12674-11-2	Aroclor 1016	37 U
53469-21-9	Aroclor 1242	37 U
12672-29-6	Aroclor 1248	37 U
11097-69-1	Aroclor 1254	37 U
11096-82-5	Aroclor 1260	37 U
11104-28-2	Aroclor 1221	74 U
11141-16-5	Aroclor 1232	37 U

PCB-Aroclor Surrogate RecoveryDecachlorobiphenyl 97.6%
Tetrachlorometaxylene 102%

Data Qualifiers

- J Indicates an estimated value when that result is less than the calculated detection limit.
- E Indicates a value above the linear range of the detector.
Dilution Required
- S Indicates no value reported due to saturation of the detector.
- D Indicates the surrogate was diluted out.
- U Indicates compound was analyzed for, but not detected at the given detection limit.
- B Found in associated method blank
- NA Indicates compound was not analyzed.
- NR Indicates no recovery due to interferences.
- NV Indicates no value reportable - see additional analyses.
- Y Indicates a raised reporting limit due to matrix interferences.
The analyte may be present at or below the listed concentration, but in the opinion of the analyst, confirmation was inadequate.

Summary of Confirmatory Sample Results for SWMU 77

	Station ID:	SB-08721	SB-08721	SB-08726	SB-08733	SB-08734	SB-08735
	Sample ID:	SB-08721-0030	SB-08721-0080	SB-08726-0030	SB-08733-0025	SB-08734-0050	SB-08735-0025
Constituent	Depth (ft bgs):	3.0 to 5.0	8.0 to 10.0	3.0 to 5.0	2.5 to N/A	5 to N/A	2.5 to N/A
Volatile Organic Compounds (ug/kg)							
1,1,1-Trichloroethane		1.3000 U	1.3000 U				
1,1,2,2-Tetrachloroethane		1.3000 U	1.3000 U				
1,1,2-Trichloroethane		1.3000 U	1.3000 U				
1,1,2-Trichlorotrifluoroethane		2.6000 UJ	2.5000 UJ				
1,1-Dichloroethane		1.3000 U	1.3000 U				
1,1-Dichloroethene		1.3000 U	1.3000 U				
1,2-Dichloroethane		1.3000 U	1.3000 U				
1,2-Dichloropropane		1.3000 U	1.3000 U				
2-Butanone		6.6000 U	6.3000 U				
2-Chloroethylvinylether		6.6000 U	6.3000 U				
2-Hexanone		6.6000 U	6.3000 U				
4-Methyl-2-Pentanone		6.6000 U	6.3000 U				
Acetone		6.6000 U	29.0000				
Benzene		1.3000 U	1.3000 U				
Bromodichloromethane		1.3000 U	1.3000 U				
Bromoform		1.3000 U	1.3000 U				
Bromomethane		2.6000 U	2.5000 U				
Carbon Disulfide		1.3000 UJ	1.3000 UJ				
Carbon Tetrachloride		1.3000 U	1.3000 U				
Chlorobenzene		1.3000 U	1.3000 U				
Chloroethane		2.6000 U	2.5000 U				
Chloroform		1.3000 U	1.3000 U				
Chloromethane		2.6000 U	2.5000 U				
cis-1,2-Dichloroethene		1.3000 U	1.3000 U				

Summary of Confirmatory Sample Results for SWMU 77

Station ID:	SB-08721	SB-08721	SB-08726	SB-08733	SB-08734	SB-08735	
Sample ID:	SB-08721-0030	SB-08721-0080	SB-08726-0030	SB-08733-0025	SB-08734-0050	SB-08735-0025	
Constituent	Depth (ft bgs):	3.0 to 5.0	8.0 to 10.0	3.0 to 5.0	2.5 to N/A	5 to N/A	2.5 to N/A
cis-1,3-Dichloropropene		1.3000 U	1.3000 U				
Dibromochloromethane		1.3000 U	1.3000 U				
Ethylbenzene		1.3000 U	1.3000 U				
m,p-Xylene		2.6000 U	2.5000 U				
Methylene Chloride		3.2000	2.5000 U				
o-Xylene		1.3000 U	1.3000 U				
Styrene		1.3000 U	1.3000 U				
Tetrachloroethene		1.3000 U	1.3000 U				
Toluene		2.0000	1.3000 U				
trans-1,2-Dichloroethene		1.3000 U	1.3000 U				
trans-1,3-Dichloropropene		1.3000 U	1.3000 U				
Trichloroethene		1.3000 U	1.3000 U				
Trichlorofluoromethane		2.6000 UJ	2.5000 UJ				
Vinyl Acetate		6.6000 U	6.3000 U				
Vinyl Chloride		2.6000 U	2.5000 U				
Pesticides/PCBs (ug/kg)							
Aroclor 1016		42.0000 U	44.0000 U	36.0000 U	36.0000 U	45.0000 U	36.0000 U
Aroclor 1221		84.0000 U	88.0000 U	72.0000 U	73.0000 U	91.0000 U	71.0000 U
Aroclor 1232		42.0000 U	44.0000 U	36.0000 U	36.0000 U	45.0000 U	36.0000 U
Aroclor 1242		42.0000 U	44.0000 U	36.0000 U	36.0000 U	45.0000 U	36.0000 U
Aroclor 1248		42.0000 U	44.0000 U	36.0000 U	36.0000 U	45.0000 U	36.0000 U
Aroclor 1254		42.0000 U	44.0000 U	36.0000 U	36.0000 U	45.0000 U	36.0000 U
Aroclor 1260		42.0000 U	44.0000 U	36.0000 U	36.0000 U	45.0000 U	36.0000 U
Total Petroleum Hydrocarbons (mg/kg)							
Diesel Range		25.0000 U	25.0000 U				

Summary of Confirmatory Sample Results for SWMU 77

Constituent	Station ID:	SB-08721	SB-08721	SB-08726	SB-08733	SB-08734	SB-08735
	Sample ID:	SB-08721-0030	SB-08721-0080	SB-08726-0030	SB-08733-0025	SB-08734-0050	SB-08735-0025
	Depth (ft bgs):	3.0 to 5.0	8.0 to 10.0	3.0 to 5.0	2.5 to N/A	5 to N/A	2.5 to N/A
Gas Range		20.0000 U	20.0000 U				
Oil Range		50.0000 U	50.0000 U				
Inorganics (Total) (mg/kg)							
Antimony		6.0000 UJ	7.0000 UJ				
Arsenic		6.0000 U	7.0000 U				
Beryllium		0.1000	0.2000				
Cadmium		0.3000 U	0.3000 U				
Chromium		11.4000	16.3000				
Copper		9.6000	18.6000				
Lead		3.0000	4.0000				
Mercury		0.0600 U	0.0600 U				
Nickel		8.0000	11.0000				
Selenium		6.0000 U	7.0000 U				
Silver		0.4000 U	0.4000 U				
Thallium		6.0000 U	7.0000 U				
Zinc		22.4000	28.0000				

Summary of Confirmatory Sample Results for SWMU 77

	Station ID:	SB-08736	SB-08737	SB-08749	SB-08750	SB-08751
	Sample ID:	SB-08736-0025	SB-08737-0050	SB-08749-0040	SB-08750-0030	SB-08751-0050
Constituent	Depth (ft bgs):	2.5 to N/A	5 to N/A	4.0 to N/A	3.0 to N/A	5.0 to N/A
Volatile Organic Compounds (ug/kg)						
1,1,1-Trichloroethane						
1,1,2,2-Tetrachloroethane						
1,1,2-Trichloroethane						
1,1,2-Trichlorotrifluoroethane						
1,1-Dichloroethane						
1,1-Dichloroethene						
1,2-Dichloroethane						
1,2-Dichloropropane						
2-Butanone						
2-Chloroethylvinylether						
2-Hexanone						
4-Methyl-2-Pentanone						
Acetone						
Benzene						
Bromodichloromethane						
Bromoform						
Bromomethane						
Carbon Disulfide						
Carbon Tetrachloride						
Chlorobenzene						
Chloroethane						
Chloroform						
Chloromethane						
cis-1,2-Dichloroethene						

Summary of Confirmatory Sample Results for SWMU 77

	Station ID:	SB-08736	SB-08737	SB-08749	SB-08750	SB-08751
	Sample ID:	SB-08736-0025	SB-08737-0050	SB-08749-0040	SB-08750-0030	SB-08751-0050
Constituent	Depth (ft bgs):	2.5 to N/A	5 to N/A	4.0 to N/A	3.0 to N/A	5.0 to N/A
cis-1,3-Dichloropropene						
Dibromochloromethane						
Ethylbenzene						
m,p-Xylene						
Methylene Chloride						
o-Xylene						
Styrene						
Tetrachloroethene						
Toluene						
trans-1,2-Dichloroethene						
trans-1,3-Dichloropropene						
Trichloroethene						
Trichlorofluoromethane						
Vinyl Acetate						
Vinyl Chloride						
Pesticides/PCBs (ug/kg)						
Aroclor 1016		36.0000 U	45.0000 U	35.0000 U	36.0000 U	37.0000 U
Aroclor 1221		71.0000 U	90.0000 U	70.0000 U	72.0000 U	74.0000 U
Aroclor 1232		36.0000 U	45.0000 U	35.0000 U	36.0000 U	37.0000 U
Aroclor 1242		36.0000 U	45.0000 U	35.0000 U	36.0000 U	37.0000 U
Aroclor 1248		36.0000 U	45.0000 U	35.0000 U	36.0000 U	37.0000 U
Aroclor 1254		36.0000 U	45.0000 U	35.0000 U	36.0000 U	37.0000 U
Aroclor 1260		36.0000 U	45.0000 U	17.0000 J	36.0000 U	37.0000 U
Total Petroleum Hydrocarbons (mg/kg)						
Diesel Range						

Summary of Confirmatory Sample Results for SWMU 77

	Station ID:	SB-08736	SB-08737	SB-08749	SB-08750	SB-08751
	Sample ID:	SB-08736-0025	SB-08737-0050	SB-08749-0040	SB-08750-0030	SB-08751-0050
Constituent	Depth (ft bgs):	2.5 to N/A	5 to N/A	4.0 to N/A	3.0 to N/A	5.0 to N/A
Gas Range						
Oil Range						
Inorganics (Total) (mg/kg)						
Antimony						
Arsenic						
Beryllium						
Cadmium						
Chromium						
Copper						
Lead						
Mercury						
Nickel						
Selenium						
Silver						
Thallium						
Zinc						

OA 16

SOIL ANALYTICAL DATA



ANALYTICAL
RESOURCES
INCORPORATED


INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SB-10406-0100

Lab Sample ID: AI16G
LIMS ID: 99-7352
Matrix: Soil

QC Report No: AI16-Boeing
Project: 2-87 IM

Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized 
Reported: 06/03/99

Percent Total Solids: 73.6%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050	05/26/99	6010	05/27/99	7440-43-9	Cadmium	0.3	0.3 U
3050	05/26/99	6010	05/27/99	7440-47-3	Chromium	0.7	9.8
3050	05/26/99	6010	05/27/99	7440-50-8	Copper	0.3	9.2
CLP	05/26/99	7471	05/27/99	7439-97-6	Mercury	0.06	0.06 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Sample No: SB-10406-0100

Page 1 of 1

Lab Sample ID: AI16G

QC Report No: AI16-Boeing

LIMS ID: 99-7352

Project: 2-87 IM

Matrix: Soil

Data Release Authorized: *MS*

Date Sampled: 05/25/99

Reported: 06/03/99

Date Received: 05/25/99

Date extracted: 05/27/99

Sample Amount: 5.80 g-dry-wt

Date analyzed: 05/28/99

Final Extract Volume: 0.5 mL

Instrument: nt1

Dilution Factor: 1:1

GPC Cleanup: NO

Percent Moisture: 22.7%

pH: 7.3

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	90

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	58.8%
2-Fluorobiphenyl	65.4%
d14-p-Terphenyl	97.4%
d4-1,2-Dichlorobenzene	60.2%



ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SB-10407-0050

Lab Sample ID: AI16H
LIMS ID: 99-7353
Matrix: Soil

QC Report No: AI16-Boeing
Project: 2-87 IM

Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized:
Reported: 06/03/99

Percent Total Solids: 90.5%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050	05/26/99	6010	05/28/99	7440-43-9	Cadmium	0.2	
3050	05/26/99	6010	05/28/99	7440-47-3	Chromium	0.5	0.2 U
3050	05/26/99	6010	05/28/99	7440-50-8	Copper	0.2	9.6
CLP	05/26/99	7471	05/27/99	7439-97-6	Mercury	0.05	8.7
							0.05 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 1

Lab Sample ID: AI16H

LIMS ID: 99-7353

Matrix: Soil

Data Release Authorized: *MD*

Reported: 06/03/99

Sample No: SB-10407-0050

QC Report No: AI16-Boeing

Project: 2-87 IM

Date Sampled: 05/25/99

Date Received: 05/25/99

Date extracted: 05/27/99

Date analyzed: 05/29/99

Instrument: nt1

GPC Cleanup: NO

Sample Amount: 6.75 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1:1

Percent Moisture: 10.3%

pH: 7.2

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	74 U

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	56.9%
2-Fluorobiphenyl	61.7%
d14-p-Terphenyl	86.6%
d4-1,2-Dichlorobenzene	57.3%



ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SB-10408-0050

Lab Sample ID: AI16I
LIMS ID: 99-7354
Matrix: Soil

QC Report No: AI16-Boeing
Project: 2-87 IM

Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized
Reported: 06/03/99

Percent Total Solids: 68.7%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050	05/26/99	6010	05/27/99	7440-43-9	Cadmium	0.3	0.4
3050	05/26/99	6010	05/27/99	7440-47-3	Chromium	0.7	14.5
3050	05/26/99	6010	05/27/99	7440-50-8	Copper	0.3	16.8
CLP	05/26/99	7471	05/27/99	7439-97-6	Mercury	0.07	0.07 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 1

Lab Sample ID: AI16I

LIMS ID: 99-7354

Matrix: Soil

Data Release Authorized: *MP*

Reported: 06/03/99

Sample No: SB-10408-0050

QC Report No: AI16-Boeing

Project: 2-87 IM

Date Sampled: 05/25/99

Date Received: 05/25/99

Date extracted: 05/27/99

Date analyzed: 06/01/99

Instrument: nt1

GPC Cleanup: NO

Sample Amount: 5.19 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1:1

Percent Moisture: 30.8%

pH: 7.1

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	470

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	55.2%
2-Fluorobiphenyl	59.8%
d14-p-Terphenyl	67.6%
d4-1,2-Dichlorobenzene	54.2%



ANALYTICAL
RESOURCES
INCORPORATED

INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SB-10409-0050

Lab Sample ID: AI16J
LIMS ID: 99-7355
Matrix: Soil

QC Report No: AI16-Boeing
Project: 2-87 IM

Date Sampled: 05/25/99
Date Received: 05/25/99

Data Release Authorized
Reported: 06/03/99

Percent Total Solids: 92.4%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050	05/26/99	6010	05/27/99	7440-43-9	Cadmium	0.2	0.2 U
3050	05/26/99	6010	05/27/99	7440-47-3	Chromium	0.5	10.1
3050	05/26/99	6010	05/27/99	7440-50-8	Copper	0.2	11.1
CLP	05/26/99	7471	05/27/99	7439-97-6	Mercury	0.04	0.04 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 1

Lab Sample ID: AI16J

LIMS ID: 99-7355

Matrix: Soil

Data Release Authorized: *AM*

Reported: 06/03/99

Sample No: SB-10409-0050

QC Report No: AI16-Boeing

Project: 2-87 IM

Date Sampled: 05/25/99

Date Received: 05/25/99

Date extracted: 05/27/99

Date analyzed: 06/01/99

Instrument: ntl

GPC Cleanup: NO

Sample Amount: 6.83 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1:1

Percent Moisture: 9.5%

pH: 7.2

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	180

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	56.2%
2-Fluorobiphenyl	62.7%
d14-p-Terphenyl	83.0%
d4-1,2-Dichlorobenzene	58.4%



ANALYTICAL
RESOURCES
INCORPORATED


INORGANICS ANALYSIS DATA SHEET
TOTAL METALS

Sample No: SB10410-0050

Lab Sample ID: AI27B
LIMS ID: 99-7470
Matrix: Soil

QC Report No: AI27-Boeing
Project: 287IM

Date Sampled: 05/26/99
Date Received: 05/26/99

Data Release Authorized: 
Reported: 06/03/99

Percent Total Solids: 90.8%

Prep Meth	Prep Date	Analysis Method	Analysis Date	CAS Number	Analyte	RL	mg/kg-dry
3050	05/27/99	6010	05/28/99	7440-43-9	Cadmium	0.2	0.2 U
3050	05/27/99	6010	05/28/99	7440-47-3	Chromium	0.5	10.5
3050	05/27/99	6010	05/28/99	7440-50-8	Copper	0.2	9.1
CLP	05/27/99	7471	05/27/99	7439-97-6	Mercury	0.05	0.05 U

U Analyte undetected at given RL

RL Reporting Limit

FORM-I



ANALYTICAL
RESOURCES
INCORPORATED

ORGANICS ANALYSIS DATA SHEET

Semivolatiles by GC/MS

Page 1 of 1

Lab Sample ID: AI27B

LIMS ID: 99-7470

Matrix: Soil

Data Release Authorized: *AS*

Reported: 06/01/99

Sample No: SB10410-0050

QC Report No: AI27-Boeing

Project: 287IM

Date Sampled: 05/26/99

Date Received: 05/26/99

Date extracted: 05/27/99

Date analyzed: 06/01/99

Instrument: nt1

GPC Cleanup: NO

Sample Amount: 6.76 g-dry-wt

Final Extract Volume: 0.5 mL

Dilution Factor: 1:1

Percent Moisture: 10.2%

pH: 7.6

CAS Number	Analyte	ug/kg
117-81-7	bis(2-Ethylhexyl)phthalate	500

Semivolatiles Surrogate Recovery

d5-Nitrobenzene	61.4%
2-Fluorobiphenyl	77.2%
d14-p-Terphenyl	89.9%
d4-1,2-Dichlorobenzene	73.6%

Summary of Confirmatory Sample Results for OA 16

Station ID:		SB-10406	SB-10407	SB-10408	SB-10409	SB-10410
Sample ID:		SB-10406-0100	SB-10407-0050	SB-10408-0050	SB-10409-0050	SB-10410-0050
Constituent	Depth (ft bgs):	10 to N/A	5 to N/A	5 to N/A	5 to N/A	5 to N/A
Semi-Volatile Organic Compounds (ug/kg)						
bis(2-Ethylhexyl)phthalate		90.0000	74.0000 U	470.0000	180.0000	500.0000
Inorganics (Total) (mg/kg)						
Cadmium		0.3000 U	0.2000 U	0.4000	0.2000 U	0.2000 U
Chromium		9.8000	9.6000	14.5000	10.1000	10.5000
Copper		9.2000	8.7000	16.8000	11.1000	9.1000
Mercury		0.0600 U	0.0500 U	0.0700 U	0.0400 U	0.0500 U

APPENDIX D
QA CHECKLIST

Table 8—QA Checklist

SWMU 2-87.65

	Criteria	Inspection Method	Inspected by	Approved (initial)
1. Mark Soil Excavation Area	+/- 1 foot	Tape measure	Construction Engineer	A.F.
2. Soil Manifesting	NA	visual	Boeing	M.G.
3. Spill Prevention	Place plastic inside stockpile cell	Visual	Construction Engineer	A.F.
	Cover stockpile cell	Visual	Construction Engineer	A.F.
	No free liquid in soil	Visual	Construction Engineer	A.F.
	Verify no soil is spilled in route to stockpile cell	Visual	Construction Engineer	A.F.
4. Sampling	Confirmatory bottom samples and sidewall samples spaced over bottom and sides of excavation as specified in Work Plan	Visual	Construction Engineer	A.F.
5. Decontamination	Decontaminate hoe bucket	Observation	Construction Engineer	A.F.
6. Backfill	As specified by Boeing	Visual—verify before shipment to site	Boeing Engineer	M.G.
7. Excavation area and depth	As delineated based on Work Plan Figures	Measure (using tape measure or equivalent). Measure area and depth in 4 corners and 2 locations in midsection	Construction Engineer	A.F.

Table 8—QA Checklist

SWMU 77

	Criteria	Inspection Method	Inspected by	Approved (initial)
1. Mark Soil Excavation Area	+/- 1 foot	Tape measure	Construction Engineer	AF
2. Soil Manifesting	NA	visual	Boeing	MG
3. Spill Prevention (used rollofs, not stockpiles)	Place plastic inside stockpile cell	Visual	Construction Engineer	AF
	Cover stockpile cell	Visual	Construction Engineer	AF
	No free liquid in soil	Visual	Construction Engineer	AF
	Verify no soil is spilled in route to stockpile cell	Visual	Construction Engineer	AF
4. Sampling	Confirmatory bottom samples and sidewall samples spaced over bottom and sides of excavation as specified in Work Plan	Visual	Construction Engineer	AF.
5. Decontamination	Decontaminate hoe bucket	Observation	Construction Engineer	AF.
6. Backfill	As specified by Boeing	Visual—verify before shipment to site	Boeing Engineer	MG
7. Excavation area and depth	As delineated based on Work Plan Figures	Measure (using tape measure or equivalent). Measure area and depth in 4 corners and 2 locations in midsection	Construction Engineer	AF.

Table 8—QA Checklist

SWMU 78.B

	Criteria	Inspection Method	Inspected by	Approved (initial)
1. Mark Soil Excavation Area	+/- 1 foot	Tape measure	Construction Engineer	A.F.
2. Soil Manifesting	NA	visual	Boeing	MG
3. Spill Prevention	Place plastic inside stockpile cell	Visual	Construction Engineer	A.F.
	Cover stockpile cell	Visual	Construction Engineer	A.F.
	No free liquid in soil	Visual	Construction Engineer	A.F.
	Verify no soil is spilled in route to stockpile cell	Visual	Construction Engineer	A.F.
4. Sampling	Confirmatory bottom samples and sidewall samples spaced over bottom and sides of excavation as specified in Work Plan	Visual	Construction Engineer	A.F.
5. Decontamination	Decontaminate hoe bucket	Observation	Construction Engineer	A.F.
6. Backfill	As specified by Boeing	Visual—verify before shipment to site	Boeing Engineer	MG
7. Excavation area and depth	As delineated based on Work Plan Figures	Measure (using tape measure or equivalent). Measure area and depth in 4 corners and 2 locations in midsection	Construction Engineer	A.F.

Table 8—QA Checklist

SWMU OA 14

	Criteria	Inspection Method	Inspected by	Approved (initial)
1. Mark Soil Excavation Area	+/- 1 foot	Tape measure	Construction Engineer	A.F.
2. Soil Manifesting	NA	visual	Boeing	M.G.
3. Spill Prevention	Place plastic inside stockpile cell	Visual	Construction Engineer	A.F.
	Cover stockpile cell	Visual	Construction Engineer	A.F.
	No free liquid in soil	Visual	Construction Engineer	A.F.
	Verify no soil is spilled in route to stockpile cell	Visual	Construction Engineer	A.F.
4. Sampling	Confirmatory bottom samples and sidewall samples spaced over bottom and sides of excavation as specified in Work Plan	Visual	Construction Engineer	A.F.
5. Decontamination	Decontaminate hoe bucket	Observation	Construction Engineer	A.F.
6. Backfill	As specified by Boeing	Visual—verify before shipment to site	Boeing Engineer	M.G.
7. Excavation area and depth	As delineated based on Work Plan Figures	Measure (using tape measure or equivalent). Measure area and depth in 4 corners and 2 locations in midsection	Construction Engineer	A.F.

APPENDIX E

COMPARISON OF REMAINING SOIL TO MTCA C

Comparison of SWMU 2-87.65 & 78.B Machine Pit Soil vs. MTCA C

Constituent	Number of Samples Analyzed	Number of Detections	Detection Frequency (%)	Number of Exceedances (Det and Non)	Number of Detected Exceedances	Exceedance Frequency (%) (Det & Non)	MTCA C Criteria	Minimum Detected Value	Maximum Detected Value	Sample Number of Maximum Detected Value	Arithmetic Mean
Volatile Organic Compounds (ug/kg)											
1,1,1-Trichloroethane	8	4	50.0	0	0	0.00	3150000000.00000	1.8000	20.000	L09-MW109B-14	4.975
1,1-Dichloroethane	8	4	50.0	0	0	0.00	350000000.00000	4.3000	240.000	L09-MW109B-9	46.706
1,1-Dichloroethene	8	1	12.5	0	0	0.00	219000.00000	8.1000	8.100	L09-MW109B-9	1.756
1,2-Dichloroethane	8	2	25.0	0	0	0.00	1440000.00000	5.9000	35.000	L09-MW109B-9	5.606
cis-1,2-Dichloroethene	8	4	50.0	0	0	0.00	35000000.00000	2.4000	780.000	L09-MW109B-9	120.218
Tetrachloroethene	8	4	50.0	0	0	0.00	2570000.00000	1.6000	6.500	L09-MW109C-6	2.600
Toluene	8	2	25.0	0	0	0.00	700000000.00000	2.1000	5.100	L09-MW109B-9	1.568
Total Xylene	8	1	12.5	0	0	0.00	7000000000.00000	1.2000	1.200	L09-MW109C-6	1.662
trans-1,2-Dichloroethene	8	2	25.0	0	0	0.00	70000000.00000	4.4000	43.000	L09-MW109B-9	6.418
Trichloroethene	8	5	62.5	0	0	0.00	11931818.18000	18.0000	480.000	L09-MW109B-9	105.256
Vinyl Chloride	8	1	12.5	0	0	0.00	69078.94736	32.0000	32.000	L09-MW109B-9	5.506
Semi-Volatile Organic Compounds											
bis(2-Ethylhexyl)phthalate	5	1	20.0	0	0	0.00	9375000.00000	41.0000	41.000	L09-MW109C-14	18.900
Fluoranthene	5	2	40.0	0	0	0.00	140000000.00000	14.0000	27.000	L09-MW109C-14	16.100
Pyrene	5	2	40.0	0	0	0.00	105000000.00000	14.0000	26.000	L09-MW109C-14	15.900
Pesticides/PCBs (ug/kg)											
Total PCB	21	7	33.3	0	0	0.00	17045.45450	16.0000	335.000	SB-08738-0100	72.547
Inorganics (Total) (mg/kg)											
Arsenic	8	8	100.0	0	0	0.00	219.00000	1.2000	4.000	L09-MW109B-9	2.112
Chromium	8	8	100.0	0	0	0.00	3500000.00000	11.8000	19.500	L09-MW109B-9	13.675
Copper	8	8	100.0	0	0	0.00	129500.00000	9.5000	24.100	L09-MW109B-9	14.850
Zinc	8	8	100.0	0	0	0.00	1050000.00000	19.8000	40.100	L09-MW109B-9	24.262

Comparison of SWMU 77 PCB Retention Tank Soil vs. MTCA C

Constituent	Number of Samples Analyzed	Number of Detections	Detection Frequency (%)	Number of Exceedances (Det and Non)	Number of Detected Exceedances	Exceedance Frequency (%) (Det & Non)	MTCA C Criteria	Minimum Detected Value	Maximum Detected Value	Sample Number of Maximum Detected Value	Arithmetic Mean
Volatile Organic Compounds (ug/kg)											
Toluene	2	1	50.0	0	0	0.00	700000000.00000	2.0000	2.000	SB-08721-0030	1.325
Pesticides/PCBs (ug/kg)											
Total PCB	28	1	3.6	0	0	0.00	17045.45450	17.0000	17.000	SB-08749-0040	36.071
Inorganics (Total) (mg/kg)											
Chromium	11	11	100.0	0	0	0.00	3500000.00000	9.5000	252.000	W20-SB-08704-0075	46.745
Copper	11	11	100.0	0	0	0.00	129500.00000	6.9000	21.600	W20-SB-08705-0075	13.845
Mercury	11	2	18.2	0	0	0.00	1050.00000	0.0500	0.060	W20-SB-08705-0050	0.033
Nickel	11	11	100.0	0	0	0.00	70000.00000	7.0000	15.000	W20-SB-08705-0050	10.363
Zinc	11	11	100.0	0	0	0.00	1050000.00000	19.5000	34.000	W20-SB-08705-0050	26.045

Comparison of OA 16 Central Drummed Waste Storage Area (2-104.71) vs. MTCA C

Constituent	Number of Samples Analyzed	Number of Detections	Detection Frequency (%)	Number of Exceedances (Det and Non)	Number of Detected Exceedances	Exceedance Frequency (%) (Det & Non)	MTCA C Criteria	Minimum Detected Value	Maximum Detected Value	Sample Number of Maximum Detected Value	Arithmetic Mean
Volatile Organic Compounds (ug/kg)											
Trichloroethene	1	1	100.0	0	0	0.00	11931818.18000	220.0000	220.000	W15-SB-10401-0100	220.000
Semi-Volatile Organic Compounds											
bis(2-Ethylhexyl)phthalate	6	4	66.7	0	0	0.00	9375000.00000	90.0000	500.000	SB-10410-0050	219.416
Inorganics (Total) (mg/kg)											
Cadmium	9	2	22.2	0	0	0.00	3500.00000	0.3000	0.400	SB-10408-0050	0.172
Chromium	9	9	100.0	0	0	0.00	3500000.00000	9.6000	19.500	W20-SB-10404-0015	12.144
Copper	9	9	100.0	0	0	0.00	129500.00000	7.5000	16.800	SB-10408-0050	10.244
Nickel	4	4	100.0	0	0	0.00	70000.00000	7.0000	9.000	W15-SB-10401-0100	8.250
Zinc	4	4	100.0	0	0	0.00	1050000.00000	20.4000	24.000	W20-SB-10404-0065	22.700